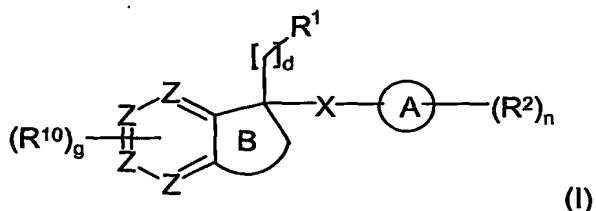


Claims

1. A compound of formula (I)



or pharmaceutically acceptable derivatives thereof, wherein:

X is a C₁₋₅ alkylene chain, wherein said X is optionally substituted by one or more =O, =S, -S(O)_r, alkyl, or halogen and wherein said C₁₋₅ alkylene chain may optionally have 0-3 heteroatoms selected from oxygen, phosphorus, sulfur, or nitrogen;

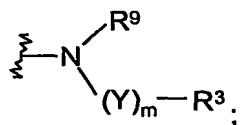
Ring A is a saturated, partially saturated, or aromatic 3-7 monocyclic or 8-10 membered bicyclic ring having one ring nitrogen and 0-4 additional heteroatoms selected from oxygen, phosphorus, sulfur, or nitrogen;

Ring B is a 4-7 membered saturated, partially saturated, or aromatic carbocyclic ring optionally containing one or two heteroatoms selected from oxygen, phosphorus, sulfur, or nitrogen; each Z may be carbon or nitrogen, provided that at least one Z is carbon;

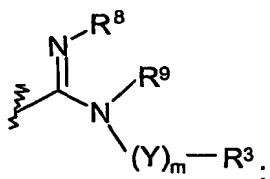
R¹ is selected from the group consisting of

(a) a saturated, partially saturated, or aromatic 4-7 monocyclic or 8-10 membered bicyclic ring having one ring nitrogen and 0-4 additional heteroatoms selected from oxygen, phosphorus, sulfur, or nitrogen, optionally attached through a C₁₋₆ alkylene chain, and optionally substituted by one or more R⁸;

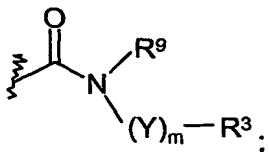
(b)



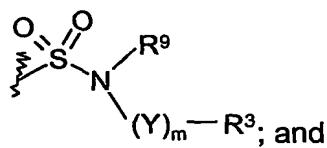
(c)



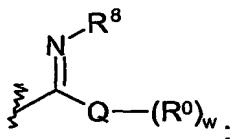
(d)



(e)



(f)



Q is carbon, oxygen, or $-S(O)_t$;

w is 1 or 2;

each R^2 is independently selected from the group consisting of $-OR^0$, $-C(O)-R^0$, $-S(O)_2-R^0$, $-C(O)-N(R^0)_2$, $-S(O)_2-N(R^0)_2$, $-(CH_2)_a-N(R^0)(-V_b-R^+)$, $-(CH_2)_a-(-V_b-R^+)$, halogen, alkyl optionally substituted by one or more R^7 , alkenyl optionally substituted by one or more R^7 , alkynyl optionally substituted by one or more R^7 , aryl optionally substituted by one or more R^6 , heteroaryl optionally substituted by one or more R^6 , cycloalkyl optionally substituted by one or more R^8 , and heterocyclyl optionally substituted by one or more R^8 ; and two adjacent R^2 's on Ring A are optionally taken together to form a fused, saturated, partially saturated or aromatic 5-6 membered ring having 0-3 heteroatoms selected from oxygen, phosphorus, sulfur, or nitrogen; or two geminal R^2 's are optionally taken together to form a spiro, saturated, partially saturated or aromatic 5-6 membered ring having 0-3 heteroatoms selected from oxygen, phosphorus, sulfur, or nitrogen, said fused or spiro ring being optionally substituted by one or more R^8 ;

each a independently is 0-3;

each b independently is 0 or 1;

V is $-C(O)-$, $-C(O)O-$, $-S(O)_2-$, or $-C(O)-N(R^0)-$;

R^+ is alkyl, cycloalkyl, aralkyl, aryl, heteroaryl, heteroaralkyl, or heterocyclyl, wherein said R^+ is optionally substituted by one or more R^8 ;

d is 1-3;

m is 0 or 1;

n is 0-5;

R^3 is H, $-N(R^0)_2$, $-N(R^0)C(O)R^0$, $-CN$, halogen, CF_3 , alkyl optionally substituted by one or more groups selected from R^7 or -S-aryl optionally substituted by $-(CH_2)_{1-6}N(R^0)SO_2(R^0)$, alkenyl optionally substituted by one or more groups selected from R^7 or -S-aryl optionally substituted by $-(CH_2)_{1-6}N(R^0)SO_2(R^0)$, alkynyl optionally substituted by one or more groups selected from R^7 or -S-aryl optionally substituted by $-(CH_2)_{1-6}N(R^0)SO_2(R^0)$, cycloalkyl or carbocyclyl optionally substituted by one or more R^8 , aryl optionally substituted by one or more R^6 , heteroaryl optionally substituted by one or more R^8 , or heterocyclyl optionally substituted by one or more R^6 ;

Y is alkyl, alkenyl, alkynyl, $-(CR^4R^5)_p$, $-C(O)-$, $-C(O)C(O)-$, $-C(S)-$, $-O-(CH_2)_{0-4}C(O)-$, $-(CH_2)_{0-4}C(O)-O-$, $-N(R^0)-C(O)-$, $-C(O)-N(R^0)-$, $-N(R^0)-C(S)-$, $-S(O)_t$, $-O-C(=N-CN)-$, $-O-C(=N-R^0)-$, $-C(=N-CN)-O-$, $-C(=N-CN)-S-$, $-C(=N-R^0)-O-$, $-S-C(=N-CN)-$, $-N(R^0)-C(=N-CN)-$, $-C(=N-CN)-$, $-N(R^0)-C[=N-C(O)-R^0]$, $-N(R^0)-C[=N-S(O)_t-R^0]$, $-N(R^0)-C(=N-OR^0)-$, $-N(R^0)-C(=N-R^0)-$, or $-C(=N-R^0)-$;

each R^4 is independently H, alkyl optionally substituted by R^7 , alkenyl optionally substituted by R^7 , or alkynyl optionally substituted by R^7 ;

each R^5 is independently selected from H, $-C(O)-OR^6$, $-C(O)-N(R^0)_2$, $-S(O)_2N(R^0)_2$, $-S(O)_2R^0$, aryl optionally substituted by R^6 , or heteroaryl optionally substituted by R^6 ;

p is 1-5;

t is 1 or 2;

each R^6 is independently selected from the group consisting of halogen, $-CF_3$, $-OCF_3$, $-OR^0$, $-(CH_2)_{1-6}OR^0$, $-SR^0$, $-(CH_2)_{1-6}SR^0$, $-SCF_3$, $-R^0$, methylenedioxy, ethylenedioxy, $-NO_2$, $-CN$, $-(CH_2)_{1-6}CN$, $-N(R^0)_2$, $-(CH_2)_{1-6}N(R^0)_2$, $-NR^0C(O)R^0$, $-NR^0(CN)$, $-NR^0C(O)N(R^0)_2$, $-NR^0C(S)N(R^0)_2$, $-NR^0CO_2R^0$, $-NR^0NR^0C(O)R^0$, $-NR^0NR^0C(O)N(R^0)_2$, $-NR^0NR^0CO_2R^0$, $-C(O)C(O)R^0$, $-C(O)CH_2C(O)R^0$, $-(CH_2)_{0-6}CO_2R^0$, $-O-C(O)R^0$, $-C(O)R^0$, $-C(O)N(R^0)N(R^0)_2$, $-C(O)N(R^0)_2$, $-C(O)N(R^0)OH$, $-C(O)N(R^0)SO_2R^0$, $-OC(O)N(R^0)_2$, $-S(O)_tR^0$, $-S(O)_tOR^0$, $-S(O)_tN(R^0)C(O)R^0$, $-S(O)_tN(R^0)OR^0$, $-NR^0SO_2N(R^0)_2$, $-NR^0SO_2R^0$, $-C(=S)N(R^0)_2$, $-C(=NH)-N(R^0)_2$, $-(CH_2)_{1-6}C(O)R^0$, $-C(=N-OR^0)-N(R^0)_2$, $-O-(CH_2)_{0-6}SO_2N(R^0)_2$, $-(CH_2)_{1-6}NHC(O)R^0$, and $-SO_2N(R^0)_2$ wherein the two R^0 's on the same nitrogen are optionally taken together to

form a 5-8 membered saturated, partially saturated, or aromatic ring having additional 0-4 heteroatoms selected from oxygen, phosphorus, nitrogen, or sulfur;

each R⁷ is independently selected from the group consisting of halogen, -CF₃, -R⁰, -OR⁰, -OCF₃, -(CH₂)₁₋₆-OR⁰, -SR⁰, -SCF₃, -(CH₂)₁₋₆-SR⁰, aryl optionally substituted by R⁶, methylenedioxy, ethylenedioxy, -NO₂, -CN, -(CH₂)₁₋₆-CN, -N(R⁰)₂, -(CH₂)₁₋₆-N(R⁰)₂, -NR⁰C(O)R⁰, -NR⁰(CN), -NR⁰C(O)N(R⁰)₂, -N(R⁰)C(S)N(R⁰)₂, -NR⁰CO₂R⁰, -NR⁰NR⁰C(O)R⁰, -NR⁰NR⁰C(O)N(R⁰)₂, -NR⁰NR⁰CO₂R⁰, -C(O)C(O)R⁰, -C(O)CH₂C(O)R⁰, -(CH₂)₀₋₆-CO₂R⁰, -C(O)R⁰, -C(O)N(R⁰)N(R⁰)₂, -C(O)N(R⁰)₂, -C(O)N(R⁰)OH, -OC(O)R⁰, -C(O)N(R⁰)SO₂R⁰, -OC(O)N(R⁰)₂, -S(O)R⁰, -S(O)₂OR⁰, -S(O)N(R⁰)C(O)R⁰, -S(O)N(R⁰)OR⁰, -NR⁰SO₂N(R⁰)₂, -NR⁰SO₂R⁰, -C(=S)N(R⁰)₂, -C(=NH)-N(R⁰)₂, -(CH₂)₁₋₆-C(O)R⁰, -C(=N-OR⁰)-N(R⁰)₂, -O-(CH₂)₀₋₆-SO₂N(R⁰)₂, -(CH₂)₁₋₆-NHC(O)R⁰, and -SO₂N(R⁰)₂ wherein the two R⁰'s on the same nitrogen are optionally taken together to form a 5-8 membered saturated, partially saturated, or aromatic ring having additional 0-4 heteroatoms selected from oxygen, phosphorus, nitrogen, or sulfur;

each R⁸ is independently selected from R⁷, =O, =S, =N(R⁰), or =N(CN);

R⁹ is hydrogen, alkyl optionally substituted by one or more R⁷, alkenyl optionally substituted by one or more R⁷, alkynyl optionally substituted by one or more R⁷, cycloalkyl optionally substituted by one or more R⁸, heterocyclyl optionally substituted by one or more R⁸, heteroaryl optionally substituted by one or more R⁶, or aryl optionally substituted by one or more R⁶:

-(Y)_m-R³ and R⁹ may combine with the nitrogen atom with which they are attached to form a saturated, partially saturated, or aromatic 5-7 membered monocyclic or 8-10 membered bicyclic ring that optionally contains 1 to 3 additional heteroatoms selected from oxygen, phosphorus, nitrogen, or sulfur, wherein said ring may be optionally substituted with one or more R⁸;

each R¹⁰ is R⁷ or two R¹⁰ optionally may be taken together to form a 3-7 member saturated, partially saturated, or aromatic carbocyclic ring, optionally containing one or more heteroatom selected from oxygen, phosphorus, nitrogen, or sulfur that is fused with the depicted ring;

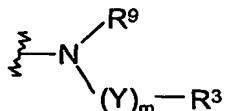
g is 0 to 4;

each R⁰ is independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, carbocyclalkyl, aryl, heteroaryl, aralkyl, heteroaralkyl, heterocyclyl, and heterocyclalkyl, wherein each member of R⁰ except H is optionally substituted by one or more R*, OR*, N(R*)₂, =O, =S, halogen, CF₃, NO₂, CN, -C(O)R*,

-CO₂R*, -C(O)-aryl, -C(O)-heteroaryl, -C(O)-aralkyl, -S(O)_t-aryl, -S(O)_t-heteroaryl, -NR*SO₂R*, -NR*C(O)R*, -NR*C(O)N(R*)₂, -N(R*)C(S)N(R*)₂, -NR*CO₂R*, -NR*NR*C(O)R*, -NR*NR*C(O)N(R*)₂, -NR*NR*CO₂R*, -C(O)C(O)R*, -C(O)CH₂C(O)R*, -C(O)N(R*)N(R*)₂, -C(O)N(R*)₂, -C(O)NR*SO₂R*, -OC(O)N(R*)₂, -S(O)_tR*, -NR*SO₂N(R*)₂, and -SO₂N(R*)₂ wherein the two R*'s on the same nitrogen are optionally taken together to form a 5-8 membered saturated, partially saturated or aromatic ring having additional 0-4 heteroatoms selected from oxygen, phosphorus, nitrogen, or sulfur; and

each R* is independently H, alkyl, alkenyl, alkynyl, cycloalkyl, aryl, or heteroaryl.

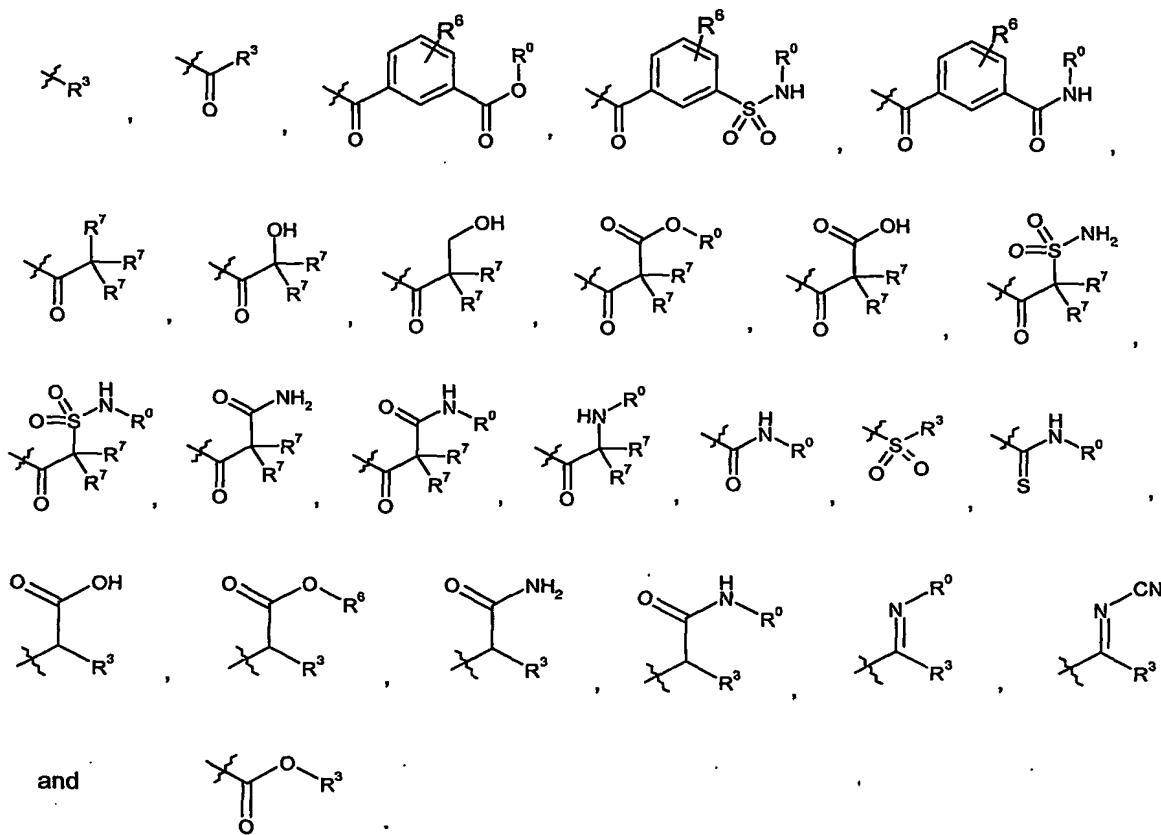
2. The compound of claim 1 wherein R¹ is



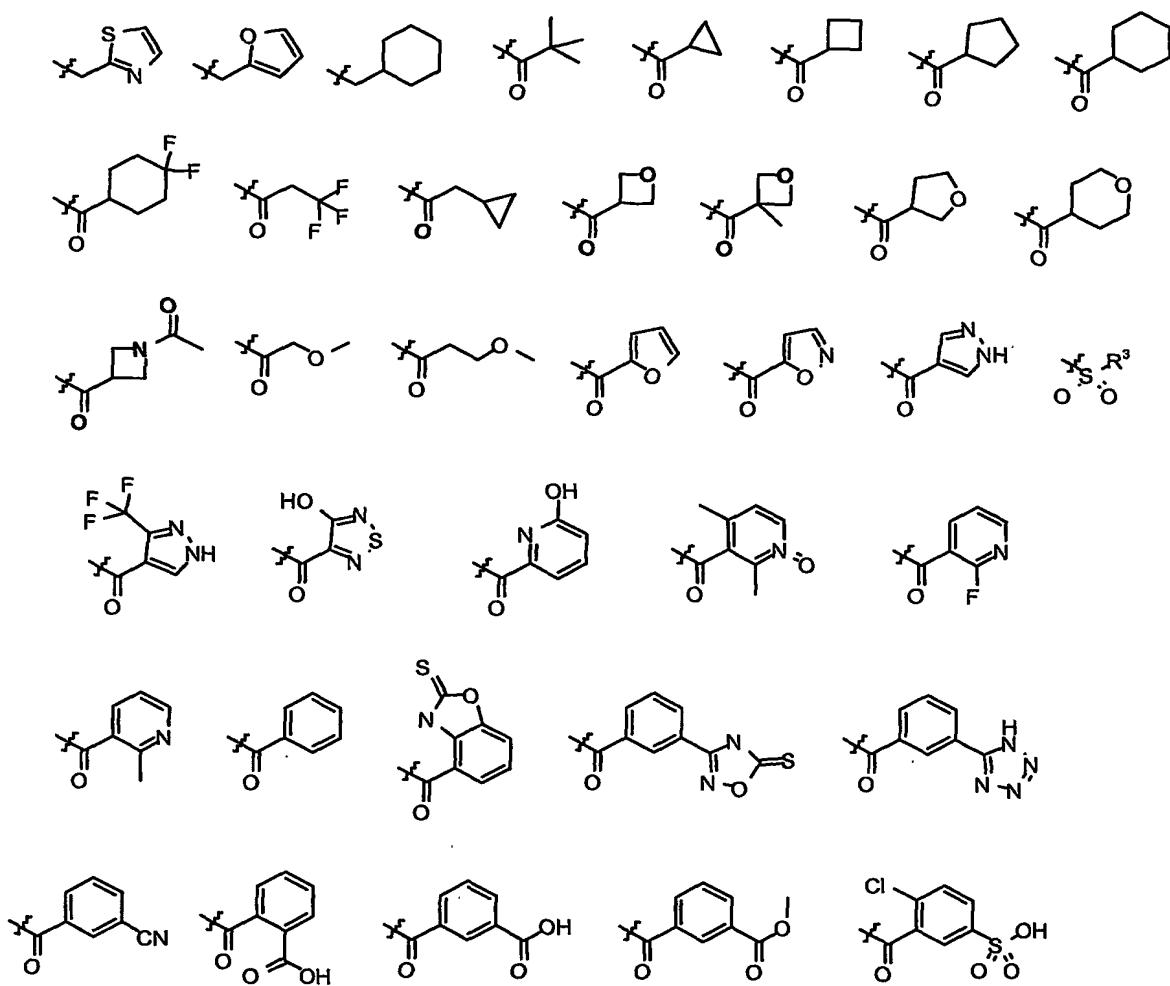
3. The compound of claim 2 wherein R⁹ is alkyl.

4. The compound of claim 2 wherein R⁹ is methyl.

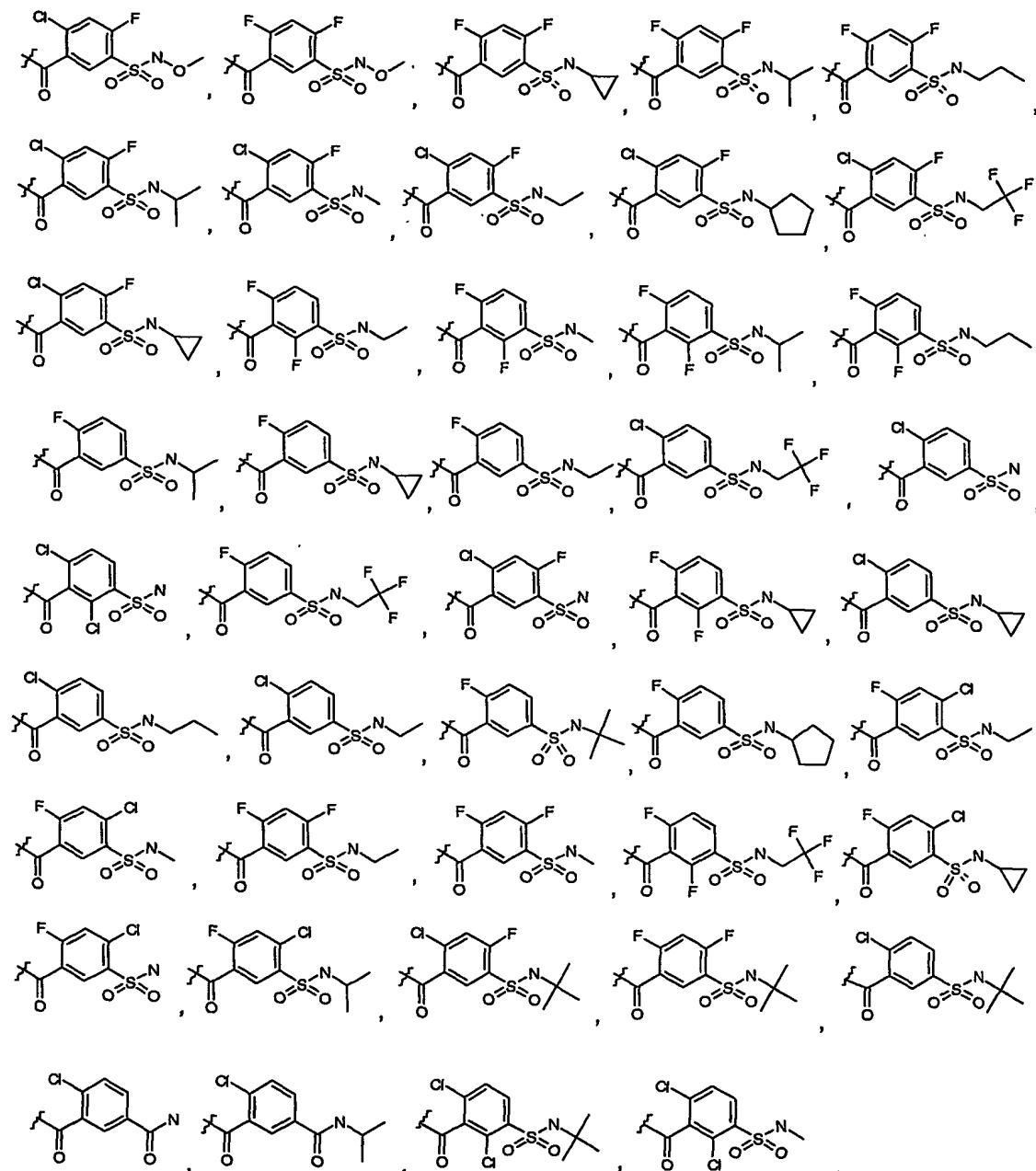
5. The compound of claim 2 wherein $-(Y)_m-R^3$ is selected from the group consisting of

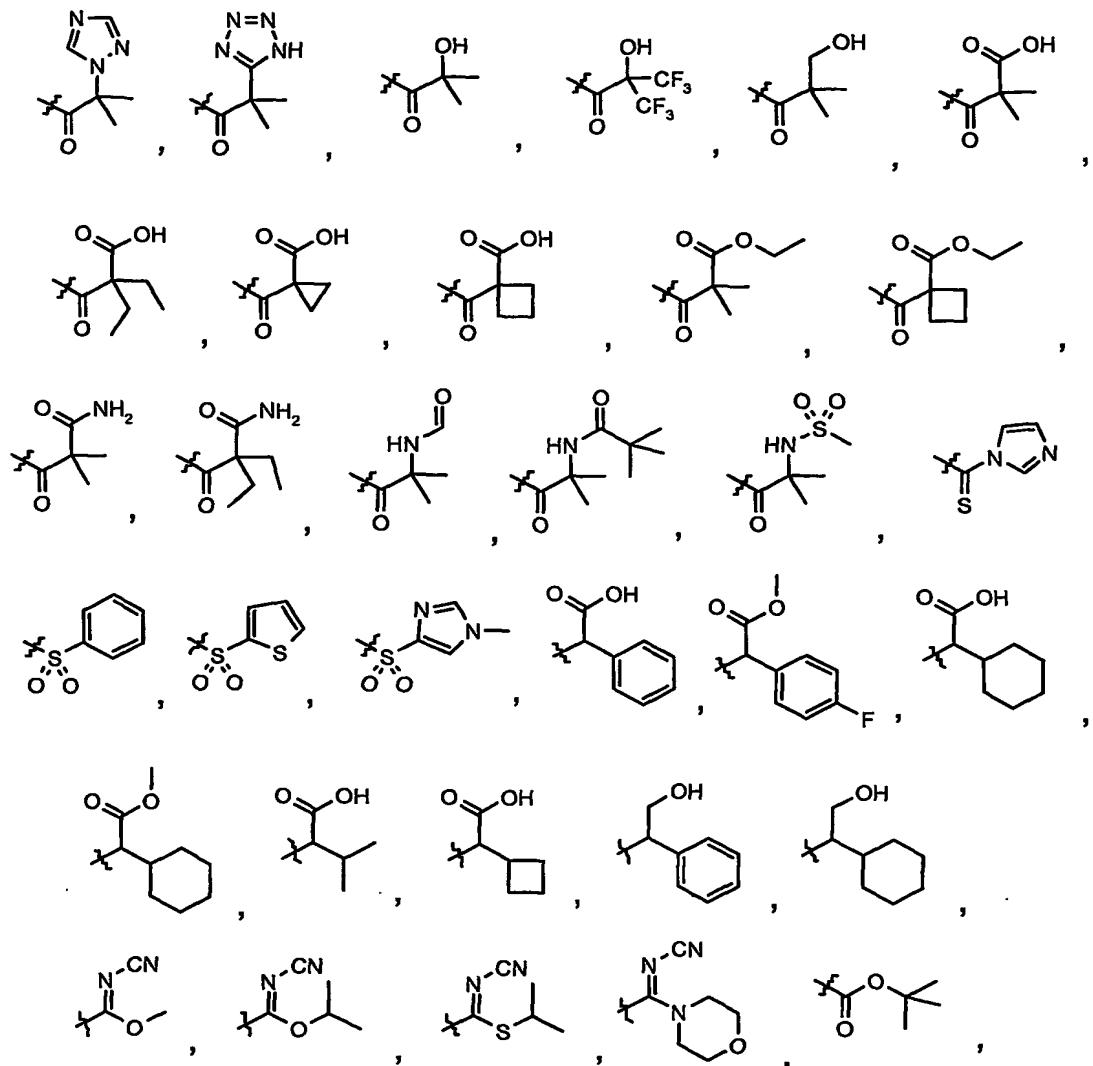


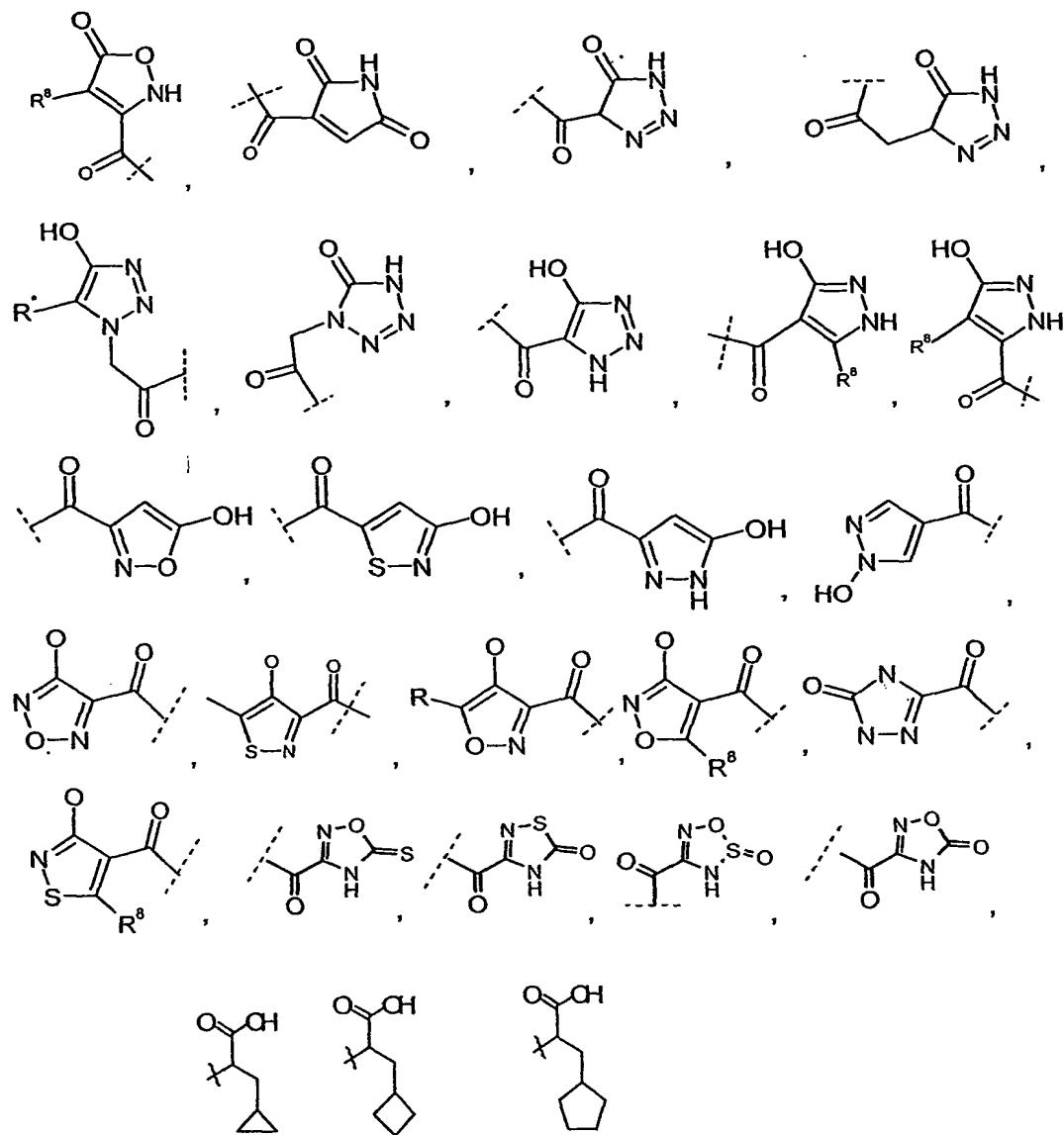
6. The compound of claim 2 wherein $-(Y)_m-R^3$ is selected from the group consisting of



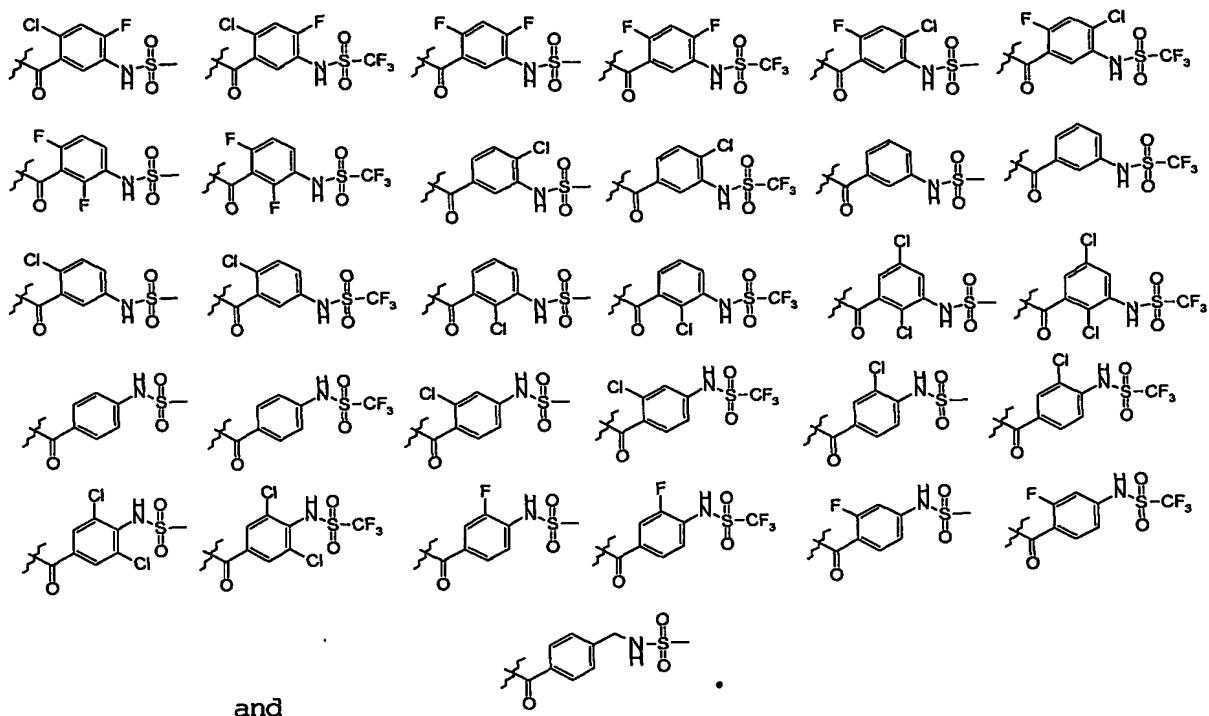
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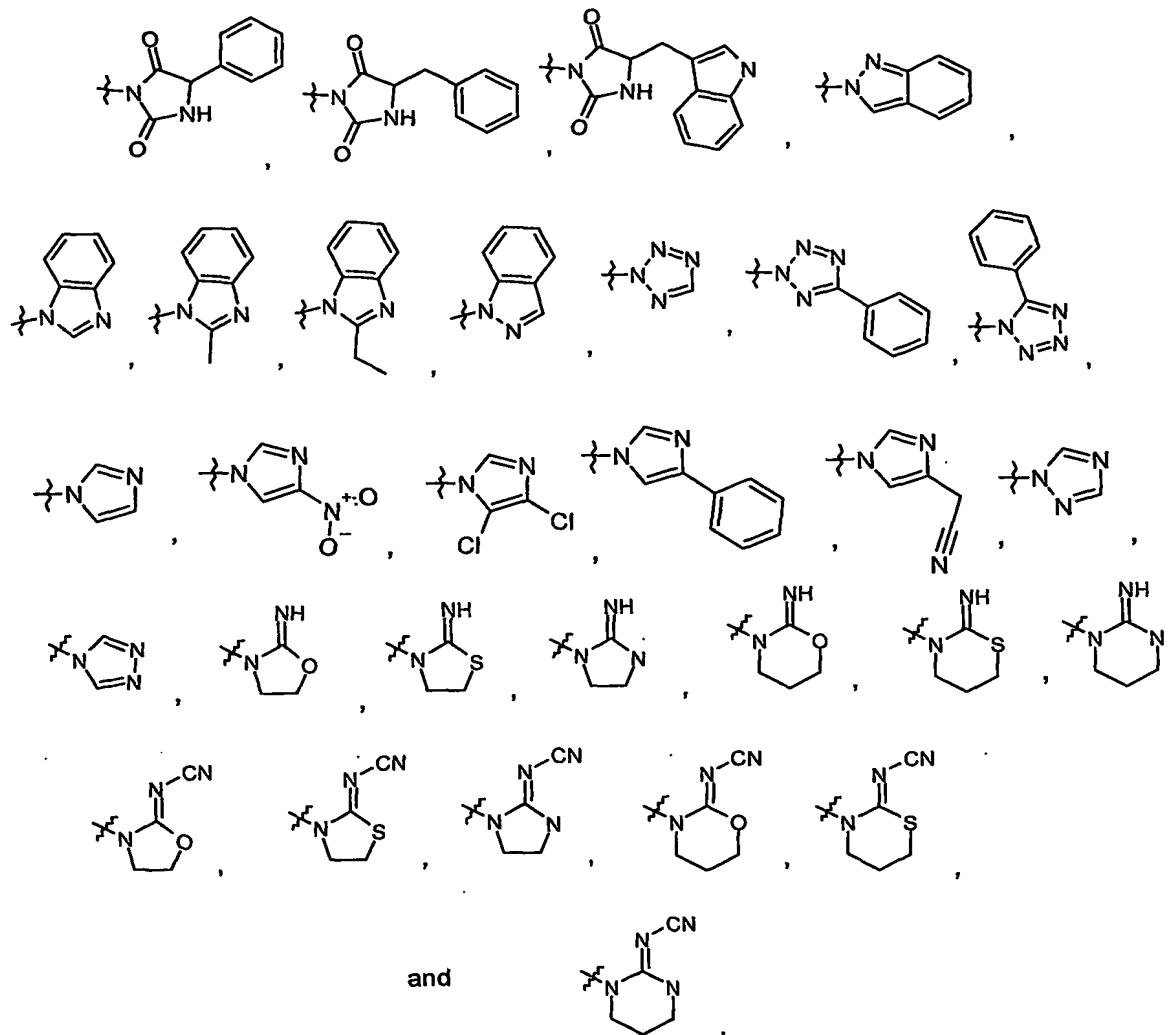




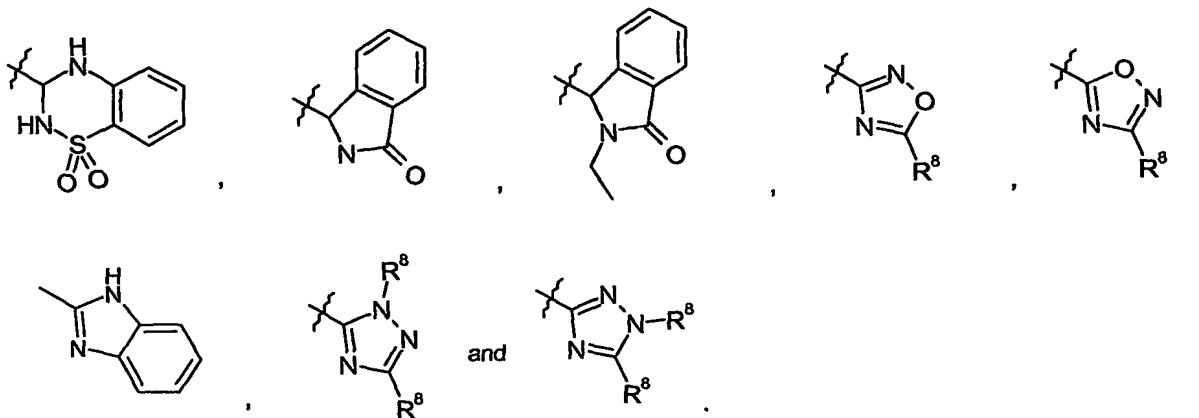
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7. The compound of claim 1 wherein $-(Y)_m-R^3$ and $-R^9$ combine with the nitrogen atom to which they are attached to form a moiety selected from the group consisting of



8. The compound of claim 1 wherein R¹ is selected from

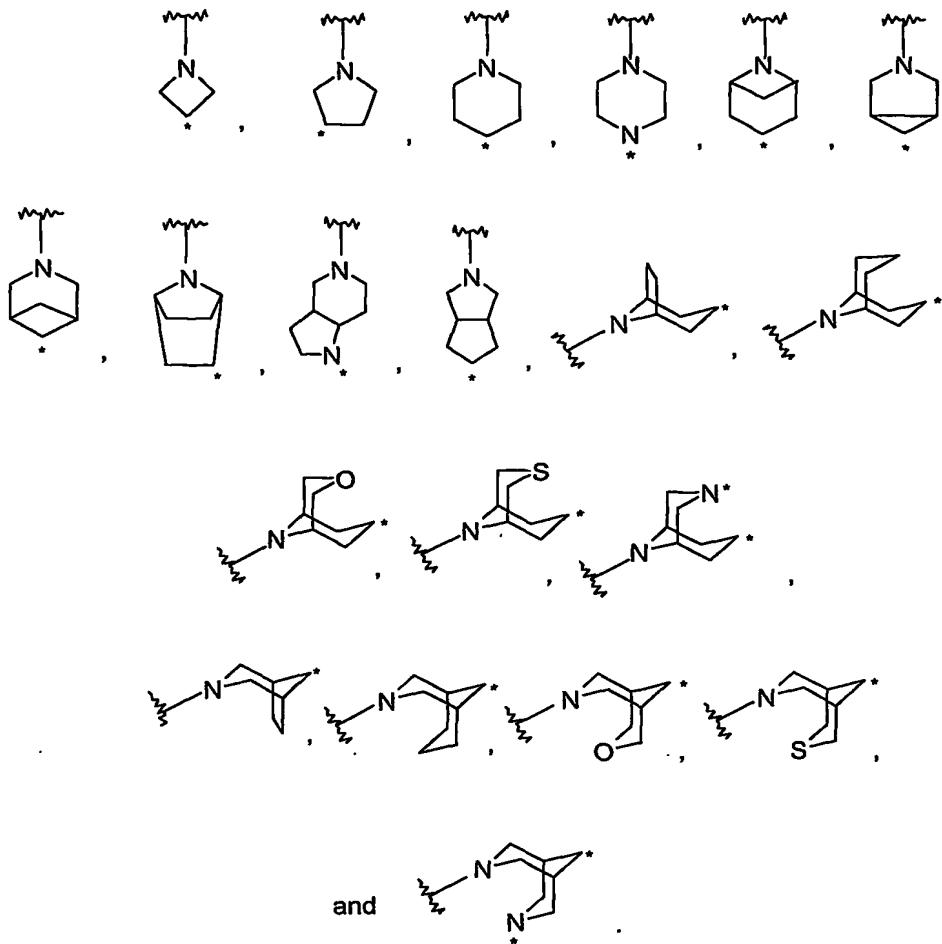


9. The compound of claim 1 wherein X is -(CH₂)-, -(CH₂-CH₂)-, or -(CH₂-CH₂-CH₂)-.

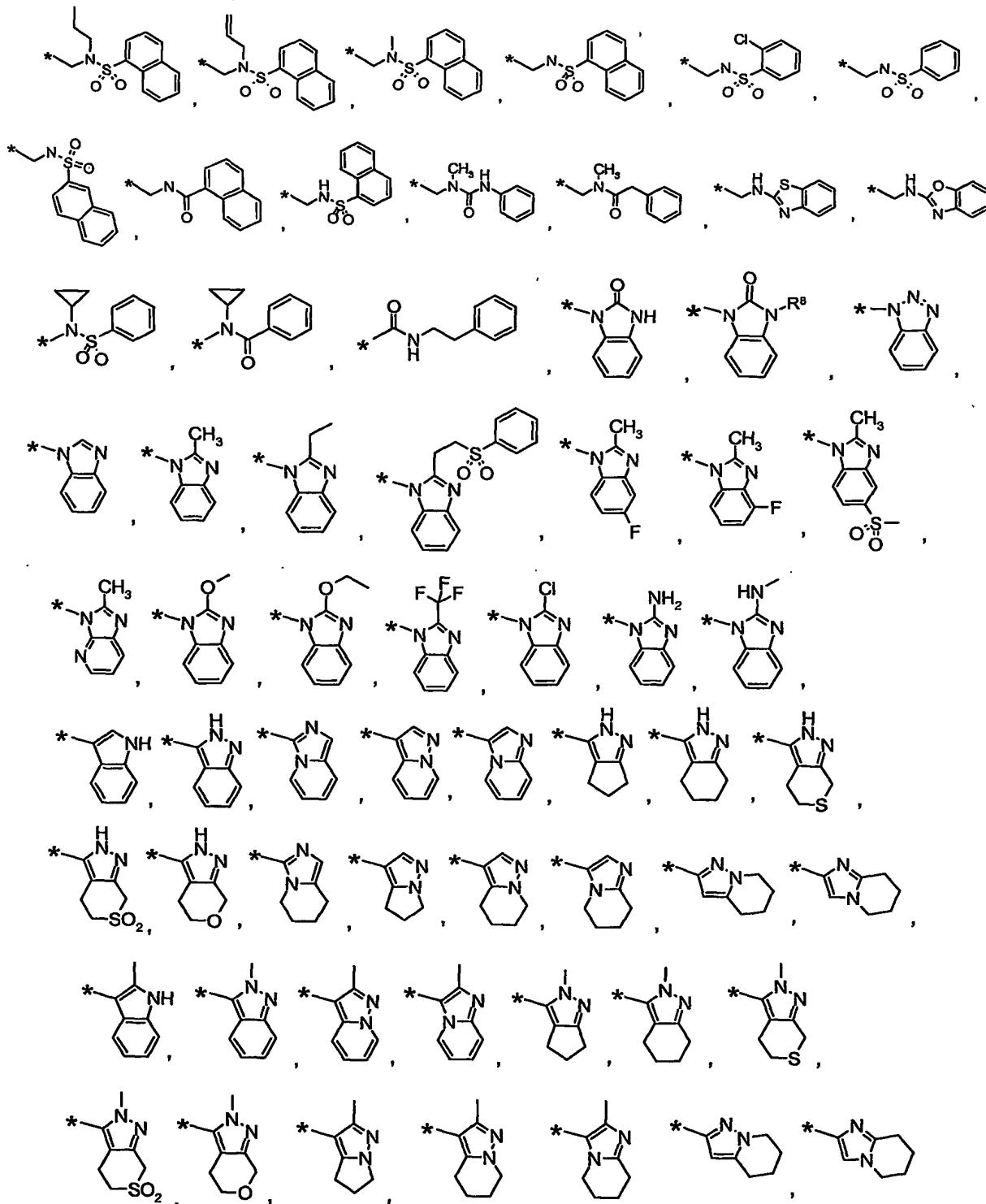
10. The compound of claim 9 wherein X is optionally substituted by one or more halogen or oxo.

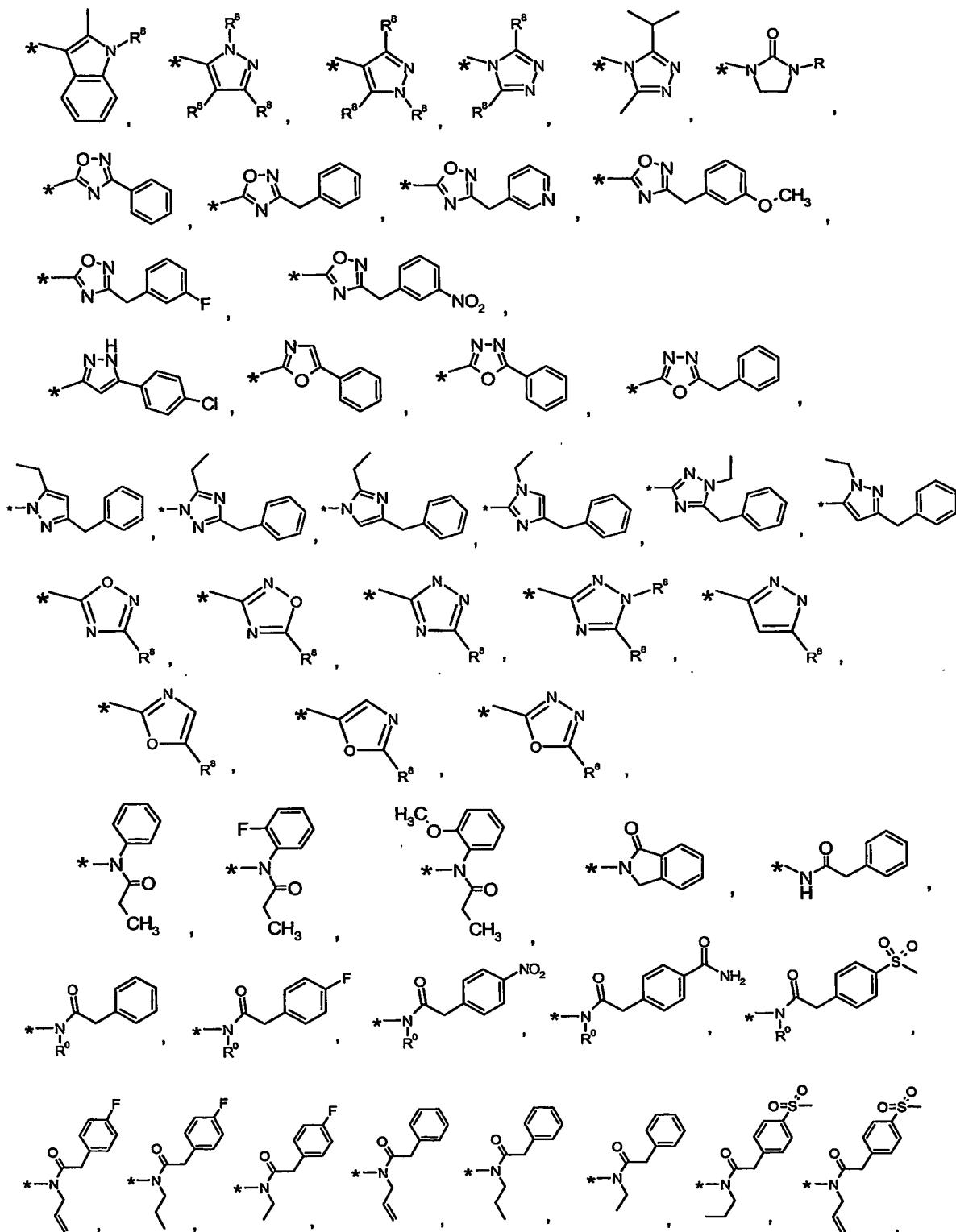
11. The compound of claim 9 wherein X optionally has 1-3 heteroatoms selected from oxygen, phosphorus, sulfur, or nitrogen.

12. The compound of claim 1 wherein the A ring is selected, with the asterisk indicating a point of optional further substitution is selected from the group consisting of

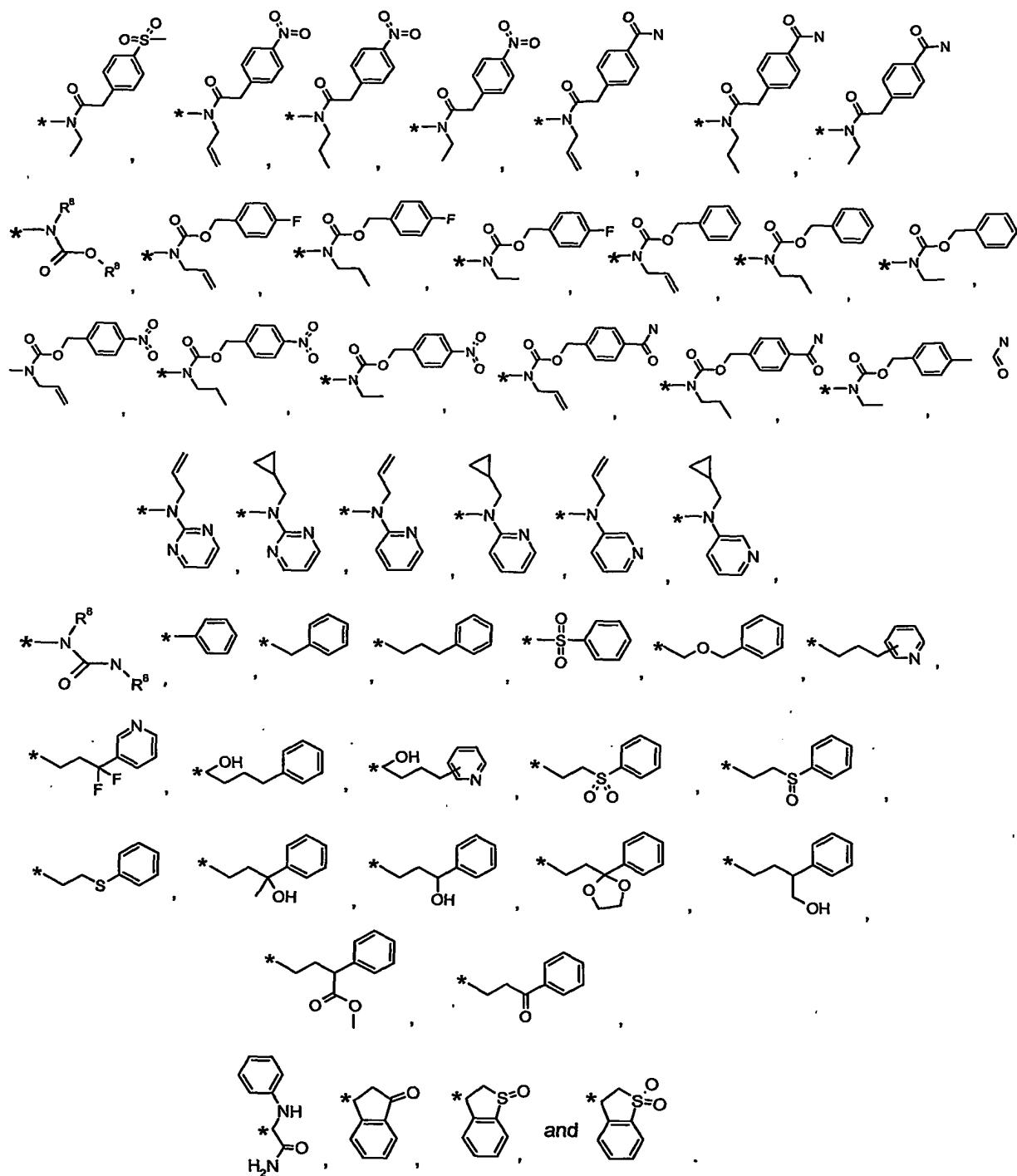


13. The compound of claim 12 wherein each R², with an asterisk indicating a point of substitution from Ring A, independently is selected from the group consisting of



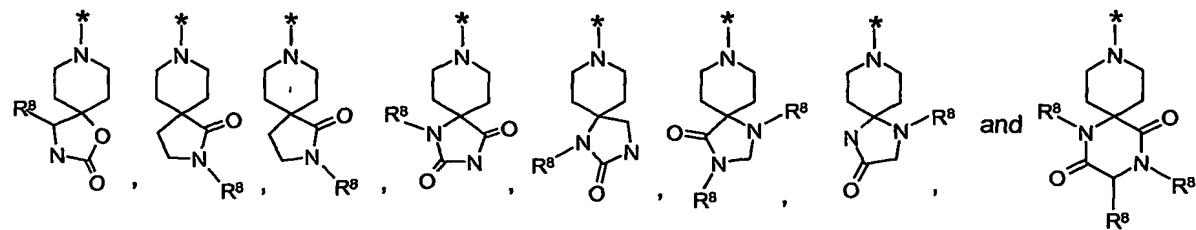


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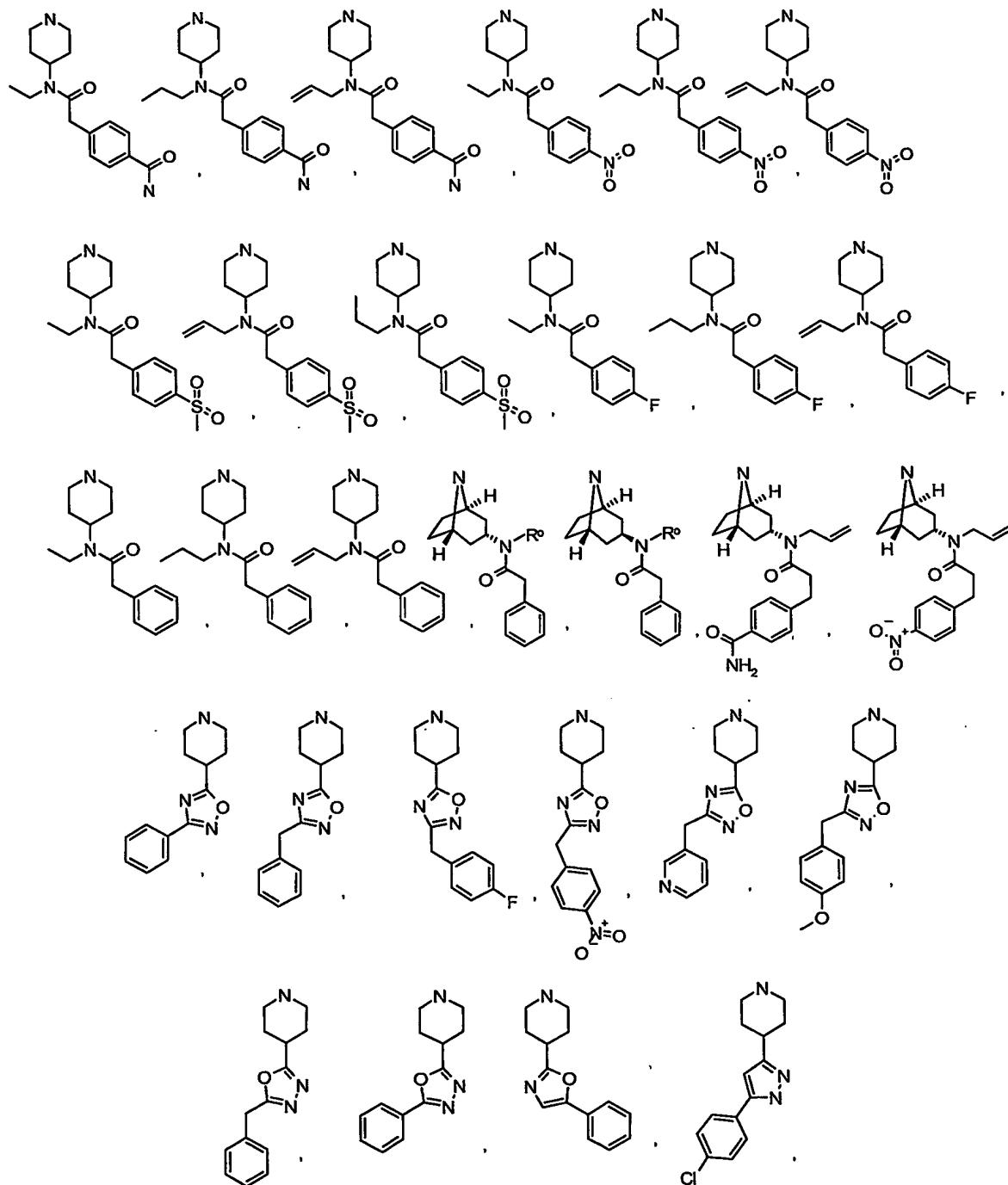
14. The compound of claim 1 wherein ring A, with two geminal R²'s, is selected from the group consisting of



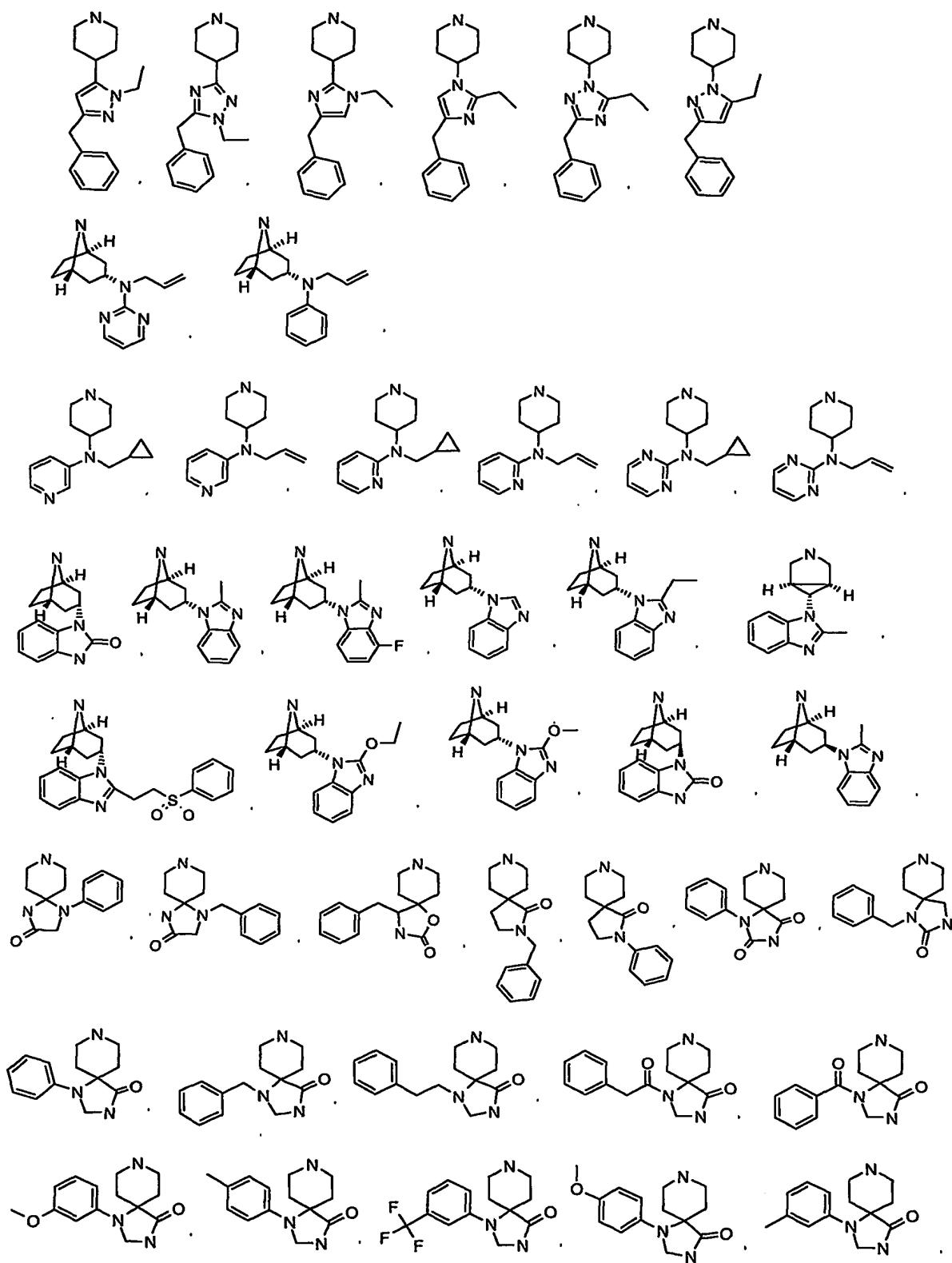
15. The compound of claim 1 wherein the A ring is tropane or piperidine, either optionally substituted with one or more R².

16. The compound of claim 15 wherein the A ring is tropane.

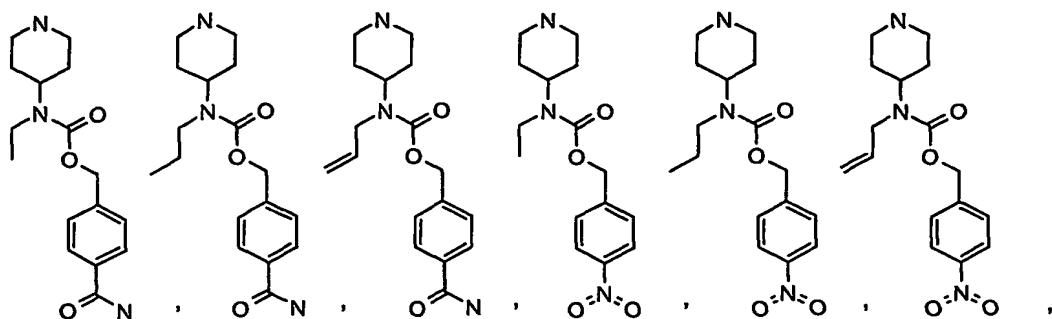
17. The compound of claim 15 wherein the A ring in combination with R² is



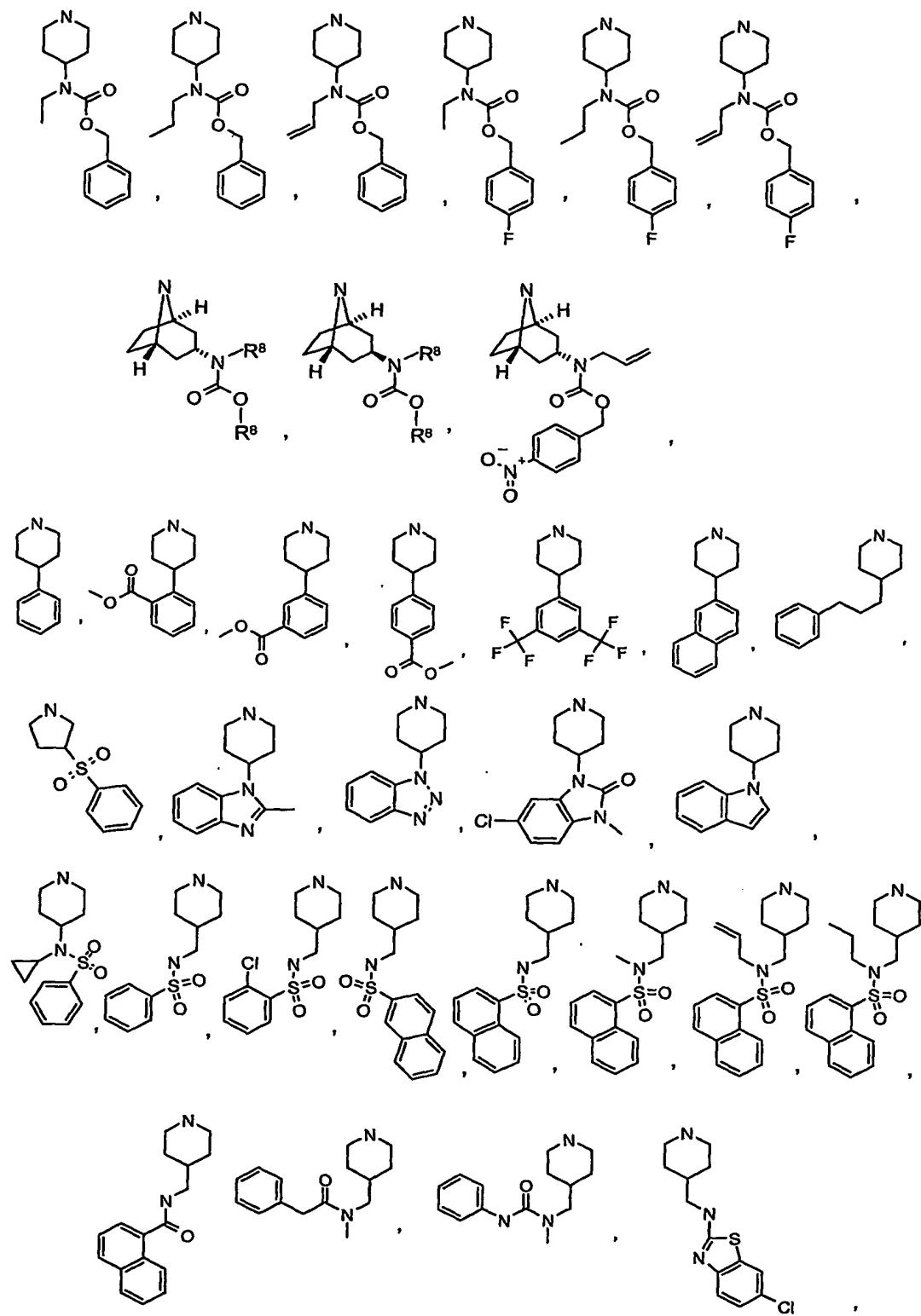
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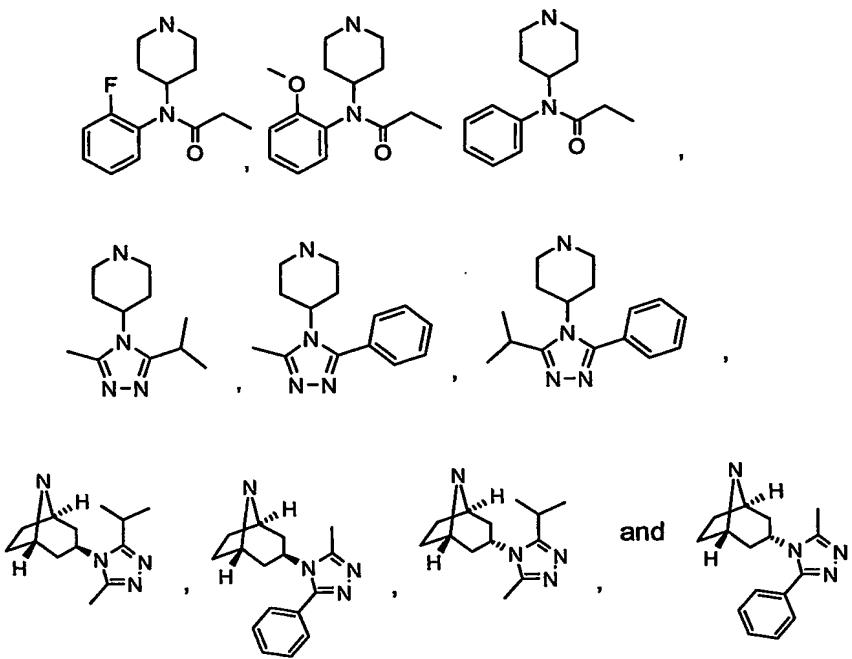


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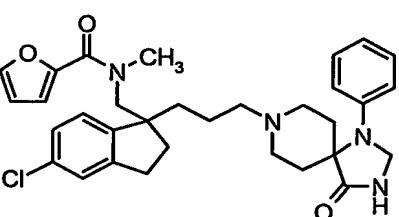
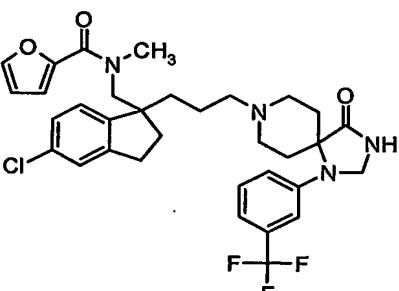
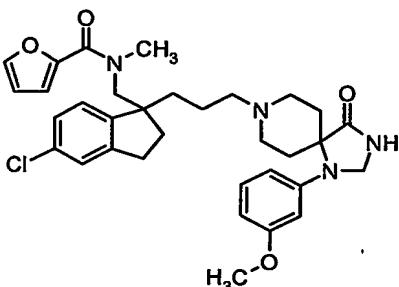
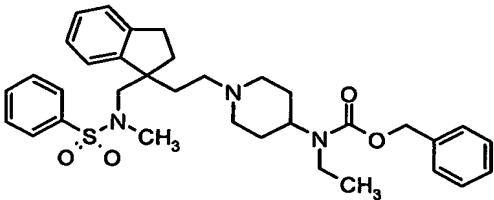
18. The compound of claim 15 wherein the tropane is endo.

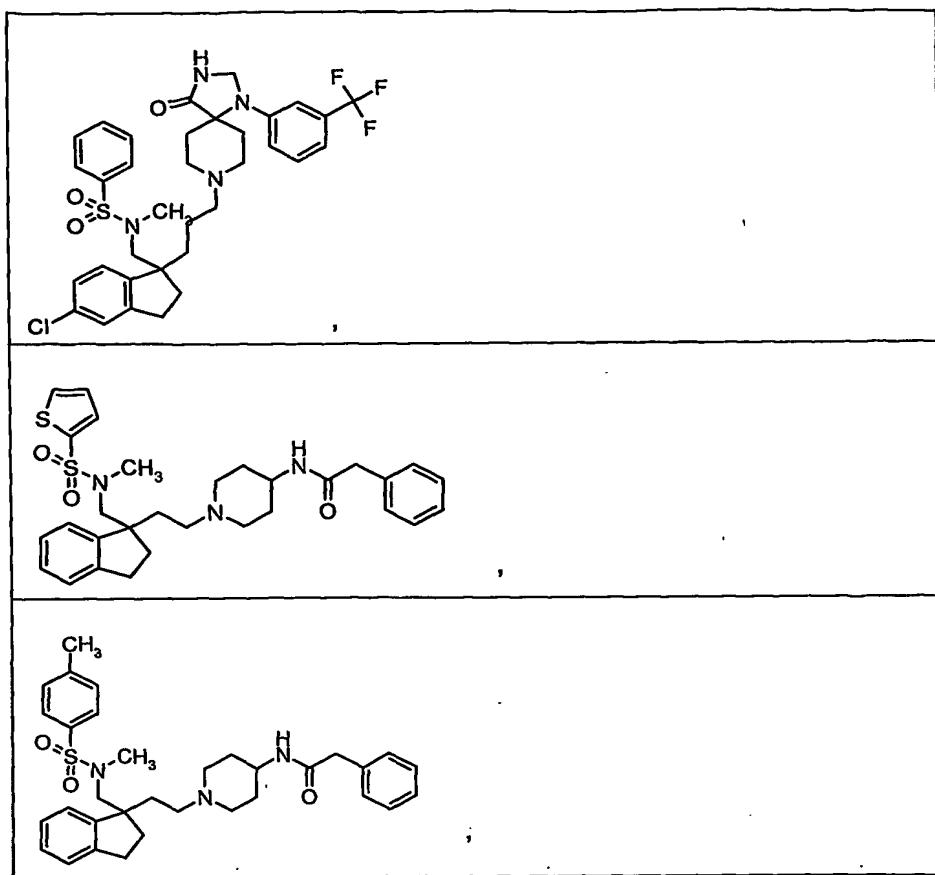
19. The compound of claim 1 wherein the A ring contains at least one additional nitrogen atom and said A ring optionally is N-substituted.

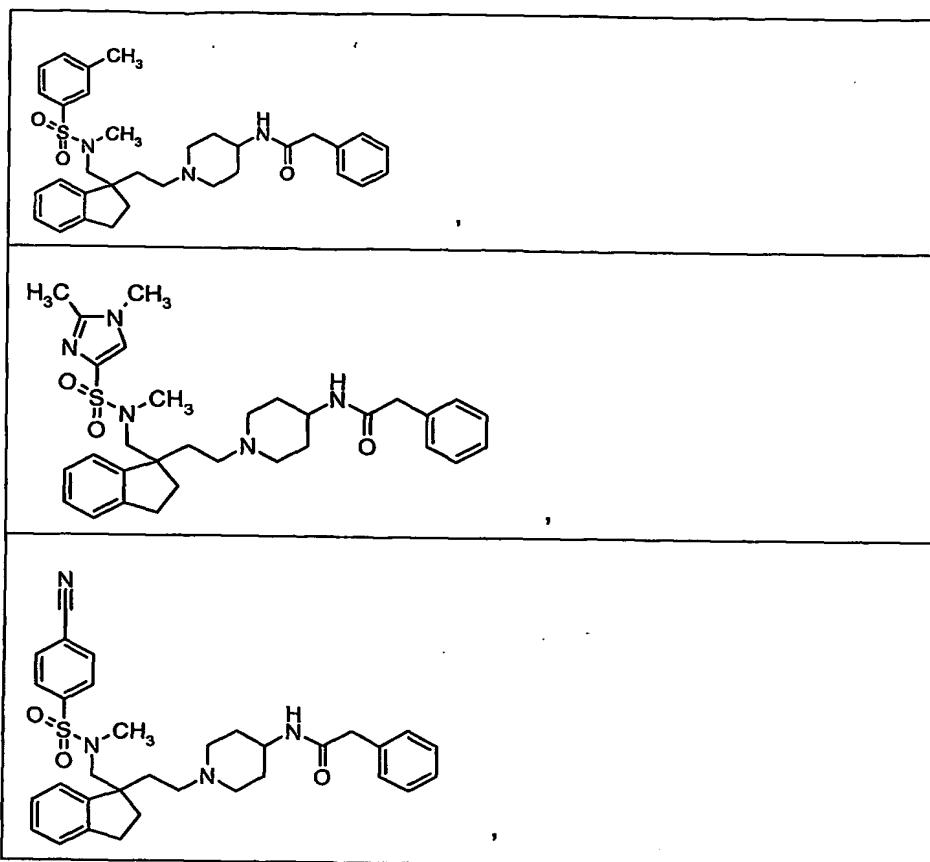
20. The compound of claim 19 wherein the A ring is N-substituted with $-(CH_2)_a-(V_b-R^+)$.

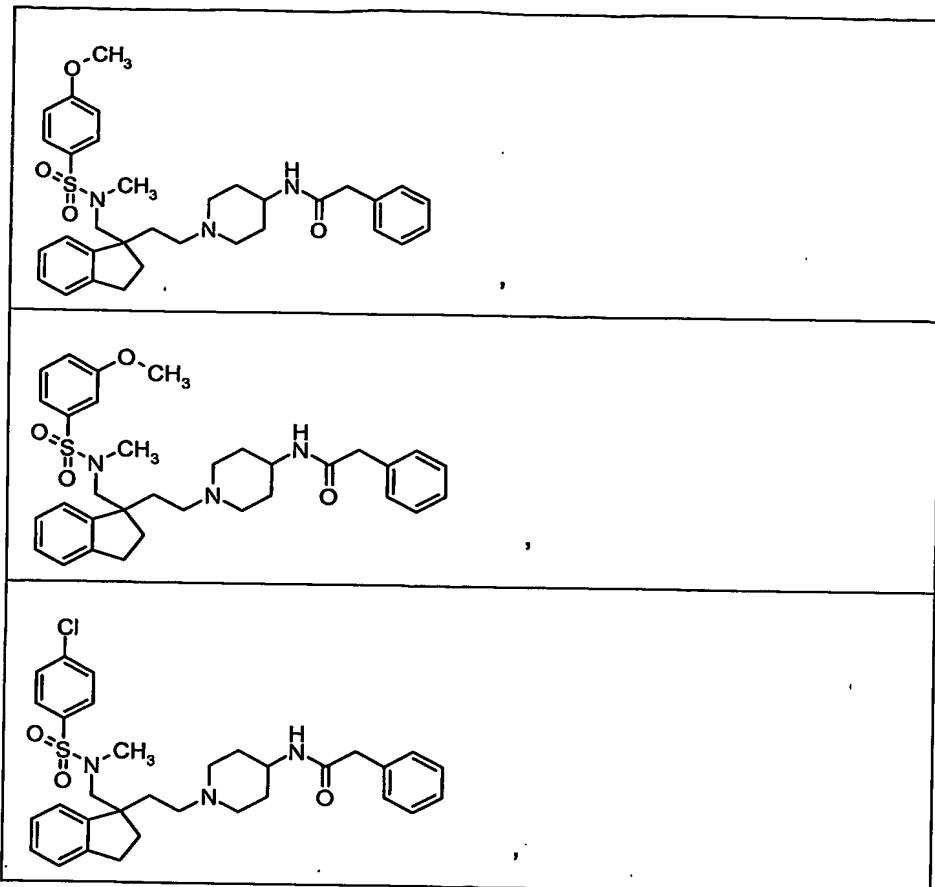
21. The compound of claim 1 wherein Ring B is a 4-7 membered saturated carbocyclic ring.

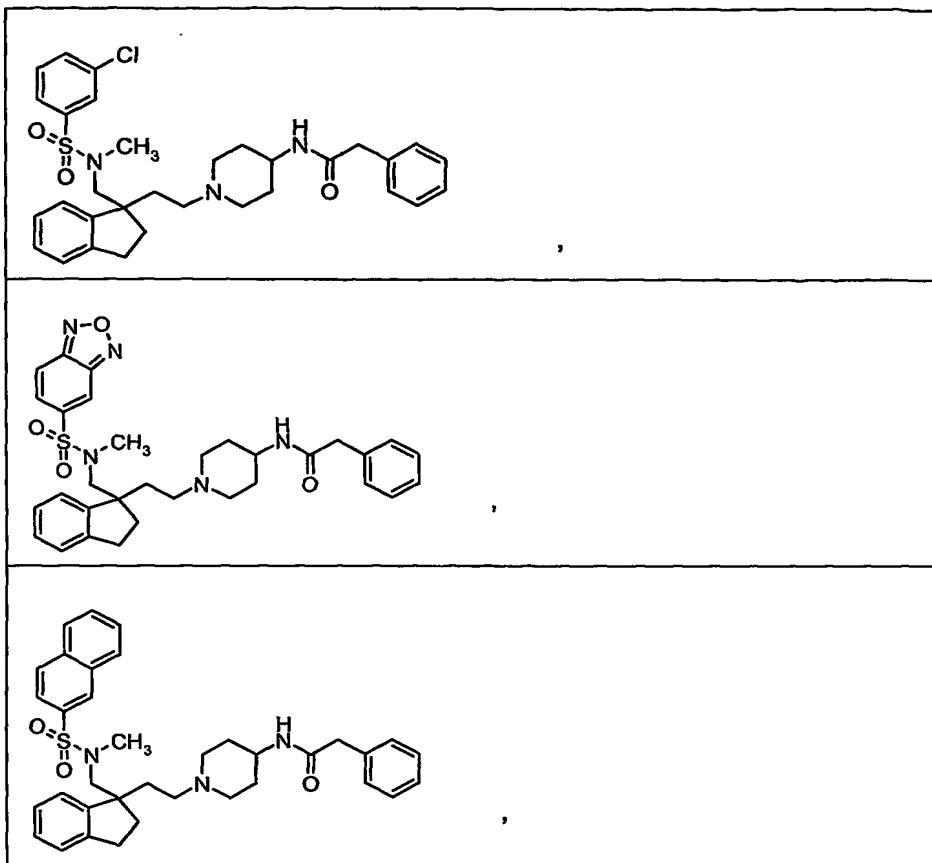
22. A compound or salt thereof selected from the group consisting of

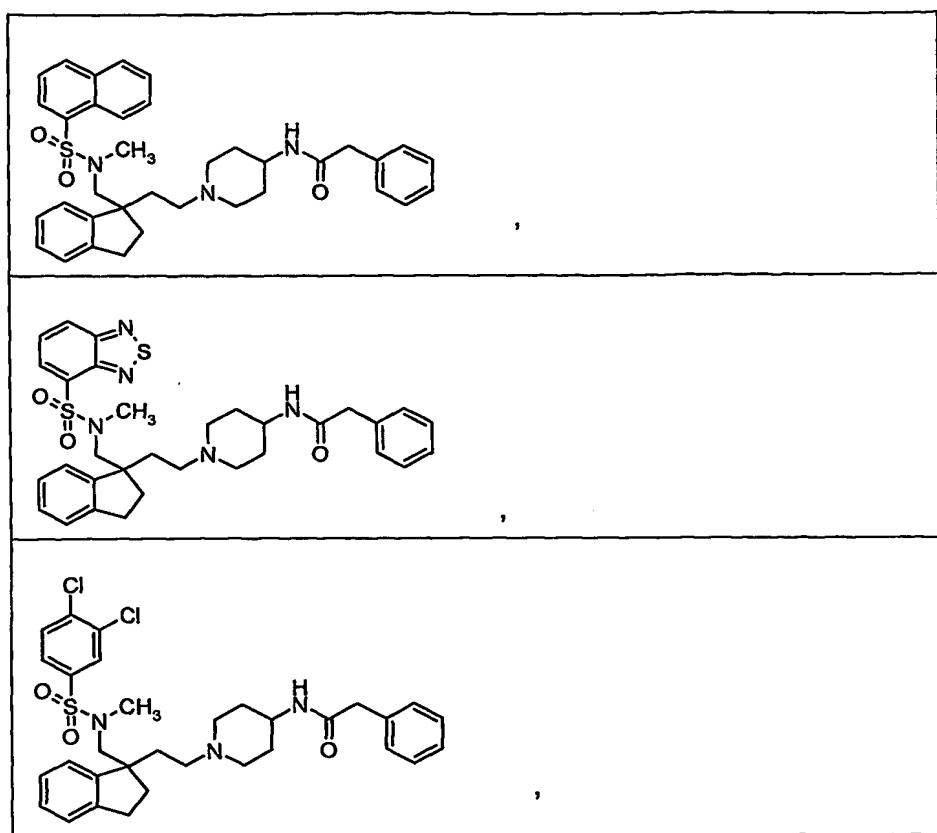


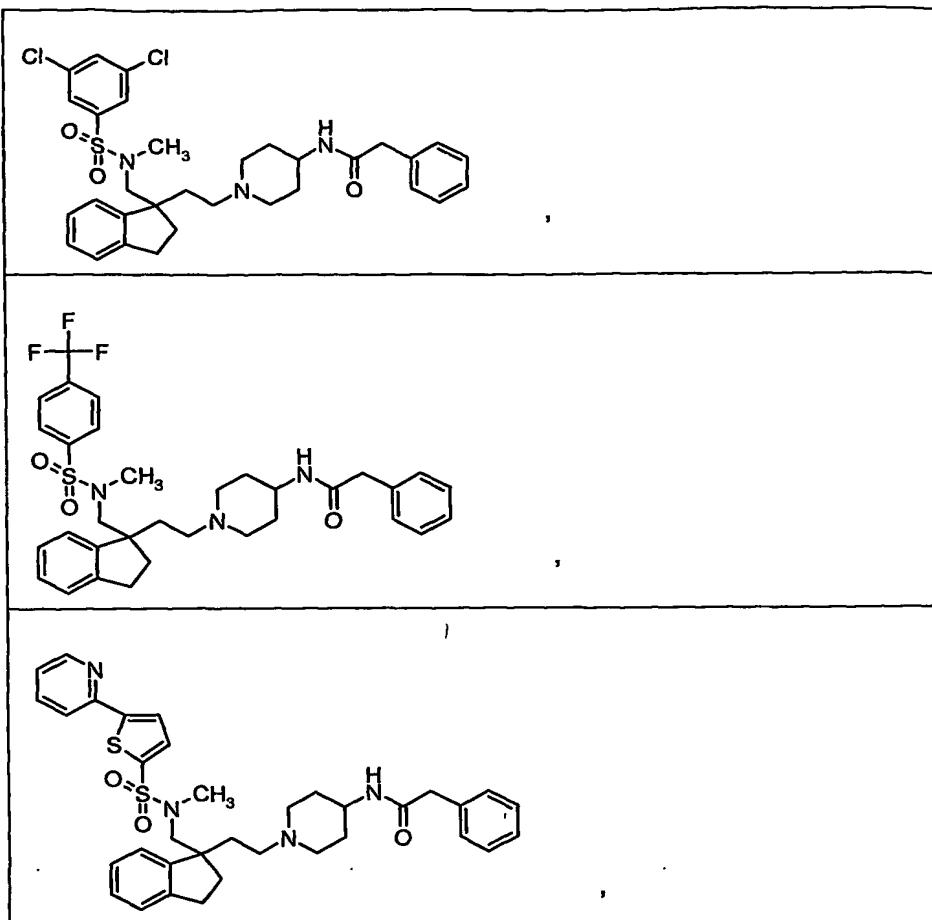


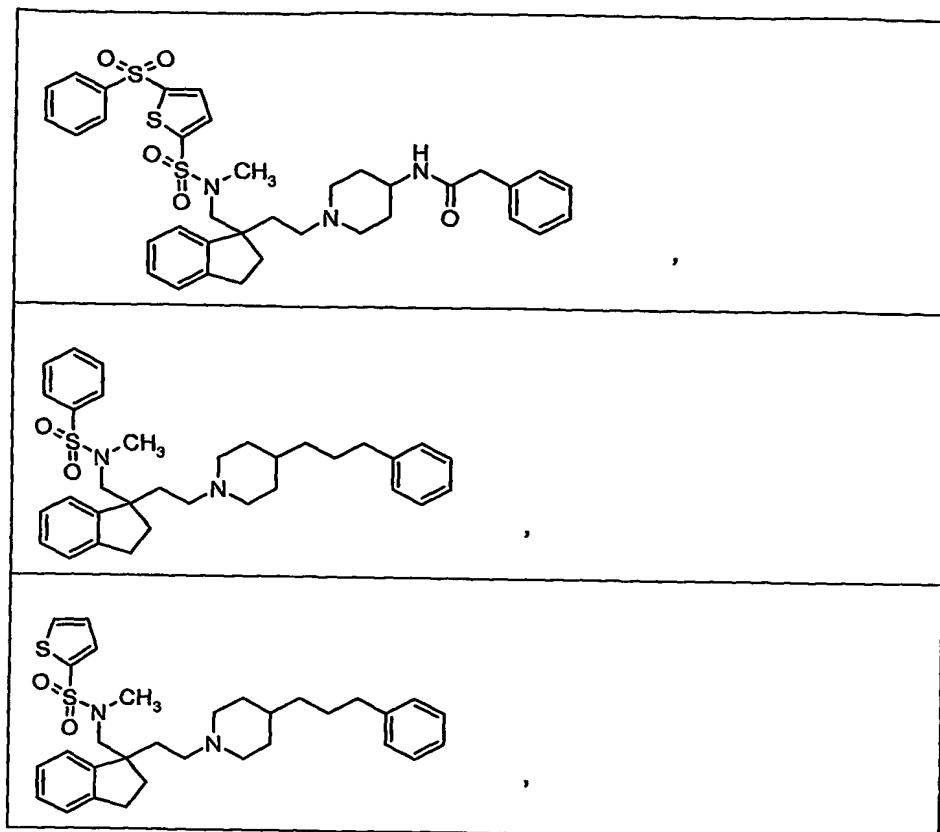


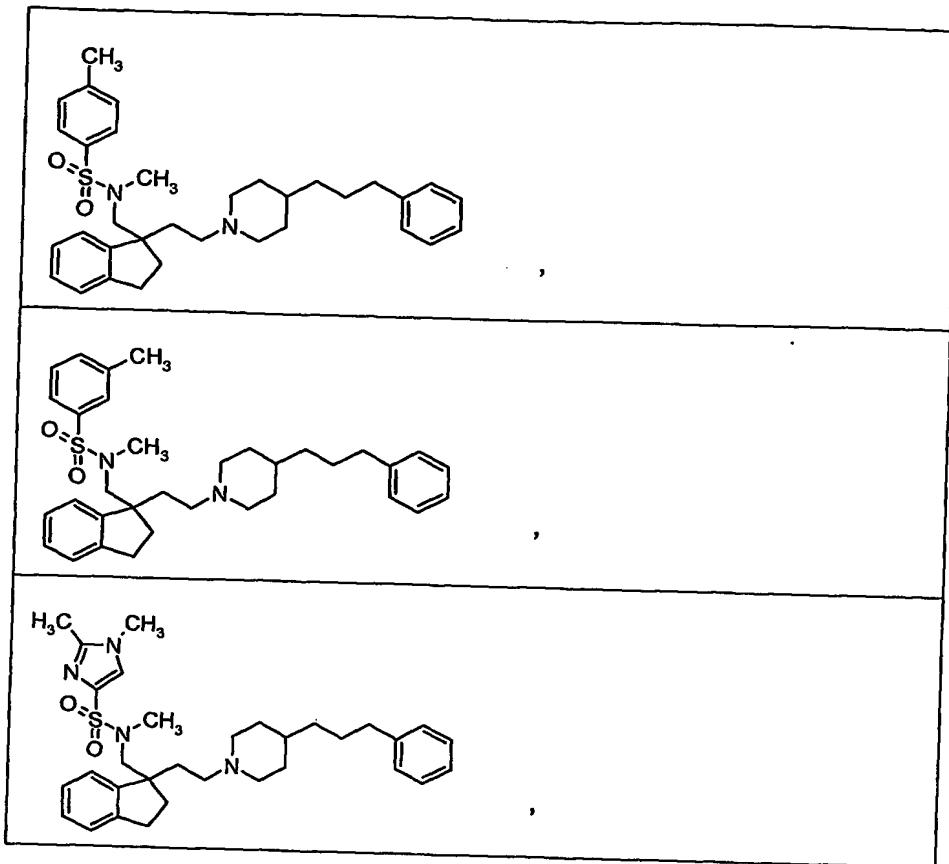


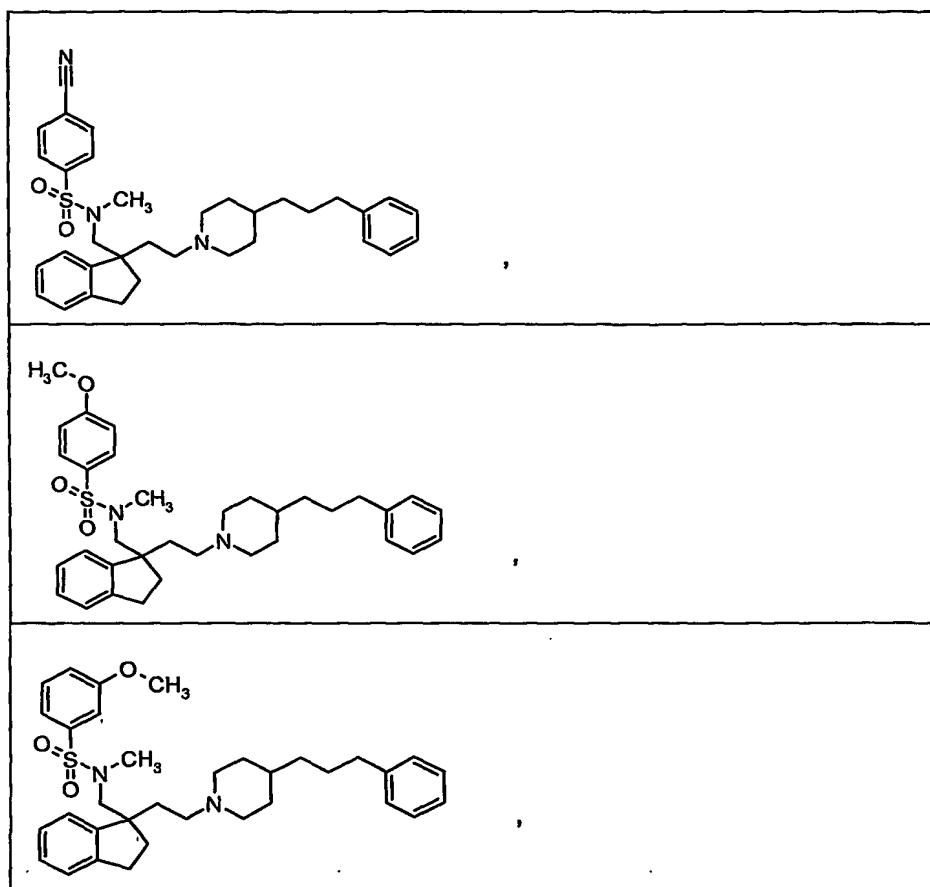


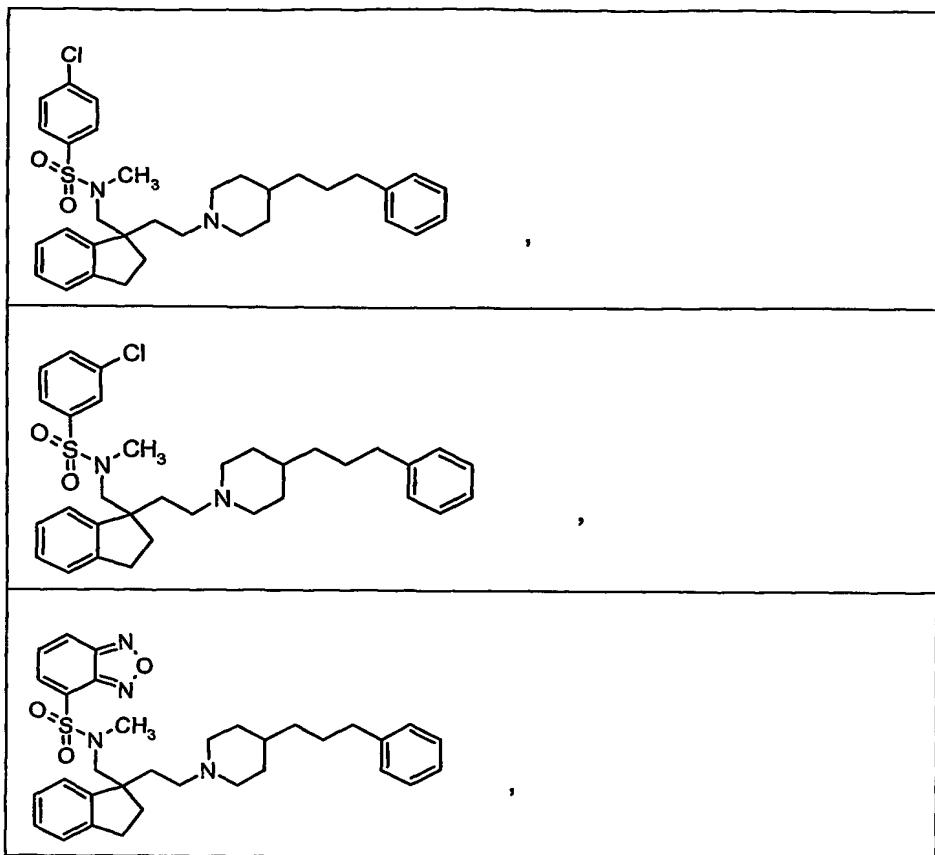


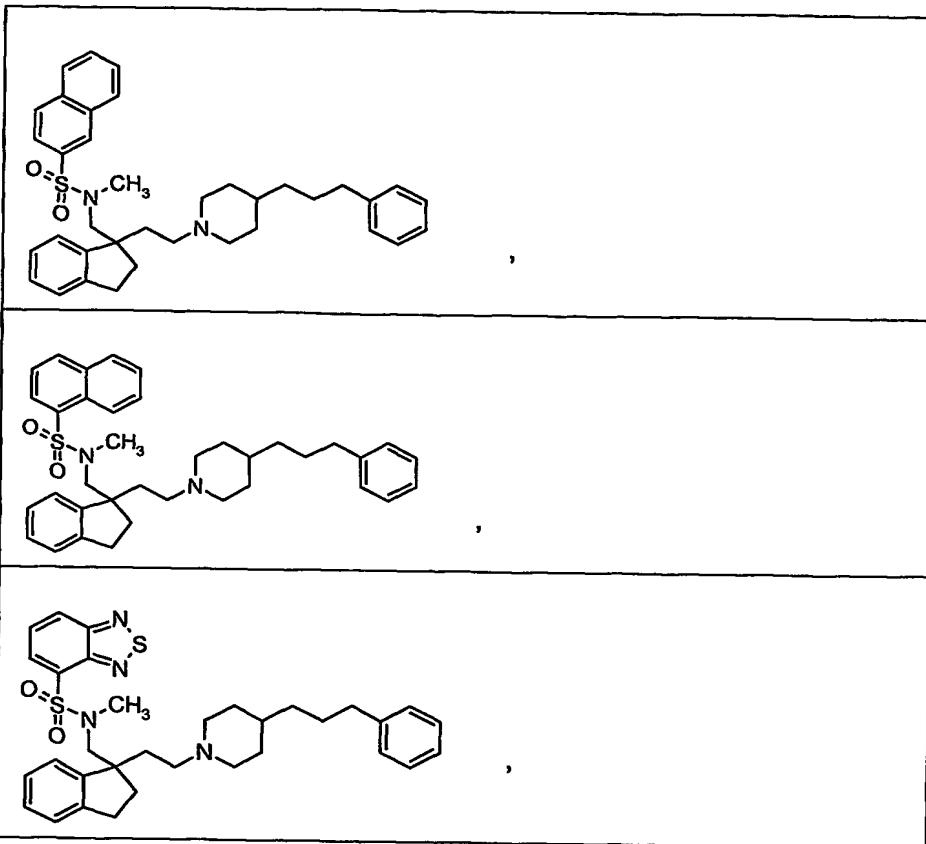


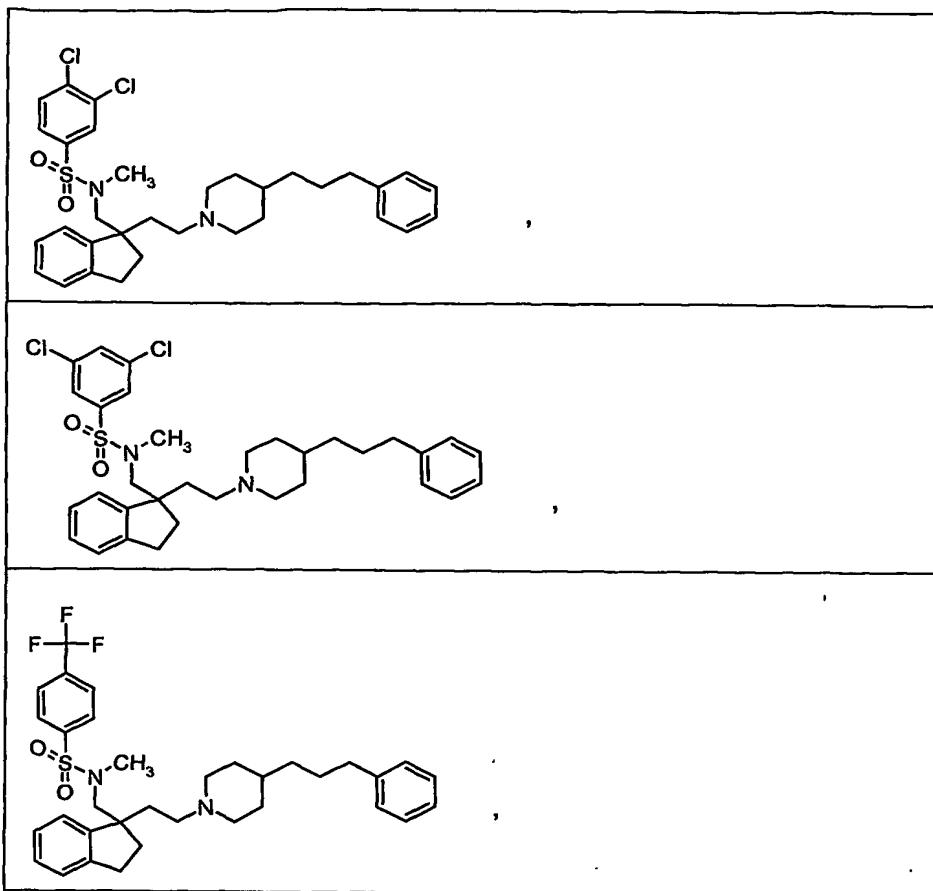


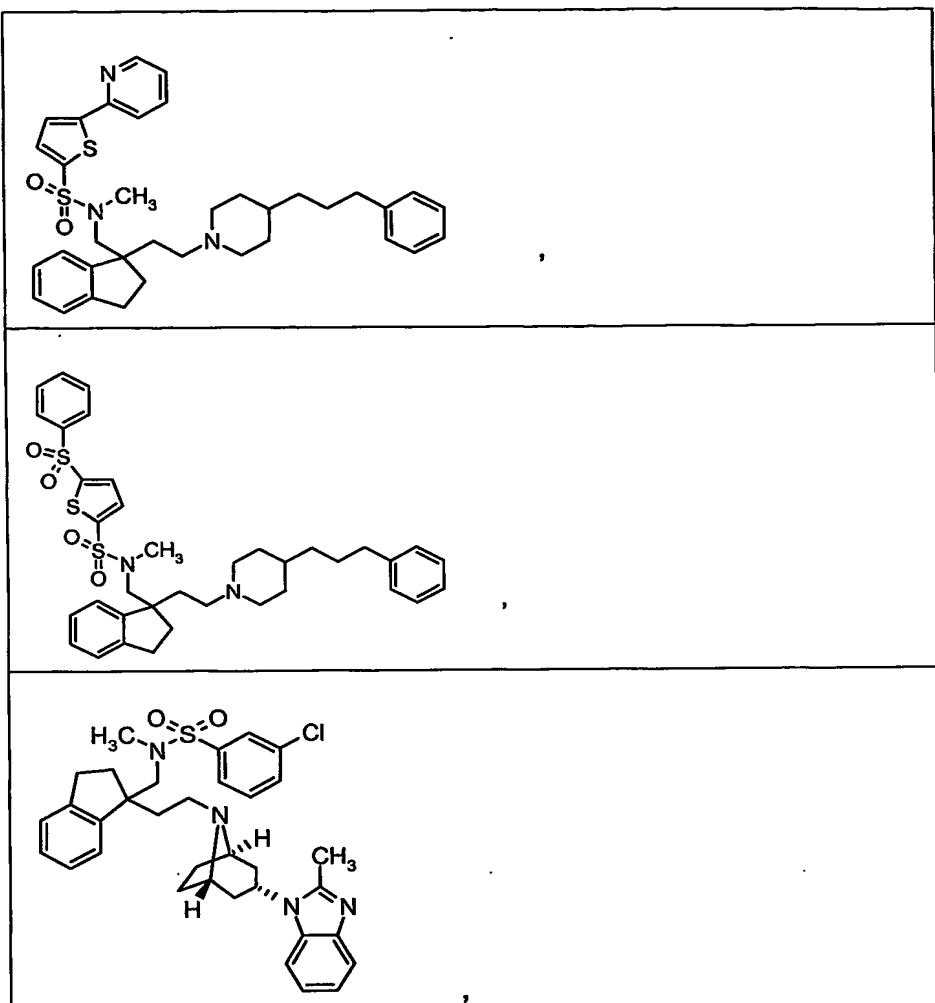


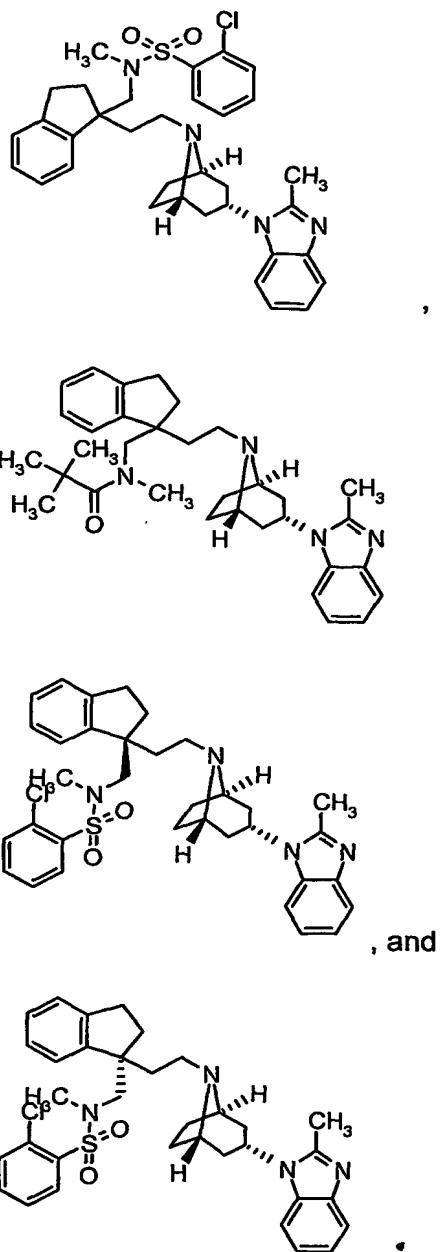












23. A method of treatment of a viral infection in a mammal comprising administering to said mammal an antiviral effective amount of a compound according to claims 1-22.

24. The method according to claim 23 wherein the viral infection is an HIV infection.

25. A method of treatment of a bacterial infection in a mammal comprising administering to said mammal an effective amount of a compound according to claims 1-22.
26. The method of claim 25 wherein the bacterium is *Yersinia pestis*.
27. A method of treatment of multiple sclerosis, rheumatoid arthritis, autoimmune diabetes, chronic implant rejection, asthma, rheumatoid arthritis, Crohns Disease, inflammatory bowel disease, chronic inflammatory disease, glomerular disease, nephrotoxic serum nephritis, kidney disease, Alzheimer's Disease , autoimmune encephalomyelitis, arterial thrombosis, allergic rhinitis, arteriosclerosis, Sjogren's syndrome (dermatomyositis), systemic lupus erythematosus, graft rejection, cancers with leukocyte infiltration of the skin or organs, infectious disorders including bubonic and pnuemonic plague, human papilloma virus infection, prostate cancer, wound healing, amyotrophic lateral sclerosis and immune mediated disorders in a mammal comprising administering to said mammal a pharmaceutically effective amount of a compound according to claims 1-22.
28. A compound according to claims 1-22 for use in medical therapy.
29. Use of a compound according to claims 1-22 in the manufacture of a medicament for the treatment or prophylaxis of a viral infection.
30. Use of a compound according to claims 1-22 in the manufacture of a medicament for the treatment or prophylaxis of a bacterial infection.
31. The use according to claim 29 wherein the viral infection is a HIV infection.
32. The use according to claim 30 wherein the bacterium is *Yersinia pestis*.

33. The use of a compound according to claims 1-22 in the manufacture of a medicament for the treatment of multiple sclerosis, rheumatoid arthritis, autoimmune diabetes, chronic implant rejection, asthma, rheumatoid arthritis, Crohns Disease, inflammatory bowel disease, chronic inflammatory disease, glomerular disease, nephrotoxic serum nephritis, kidney disease, Alzheimer's Disease , autoimmune encephalomyelitis, arterial thrombosis, allergic rhinitis, arteriosclerosis, Sjogren's syndrome (dermatomyositis), systemic lupus erythematosus, graft rejection, cancers with leukocyte infiltration of the skin or organs, infectious disorders including bubonic and pnuemonic plague, human papilloma virus infection, prostate cancer, wound healing, amyotrophic lateral sclerosis and immune mediated disorders.

34. A pharmaceutical composition comprising a pharmaceutically effective amount of a compound according to claims 1-22 together with a pharmaceutically acceptable carrier.

35. A pharmaceutical composition according to claim 34 in the form of a tablet or capsule.

36. A pharmaceutical composition according to claim 34 in the form of a liquid.

37. A method of treatment of a viral infection in a mammal comprising administering to said mammal a composition comprising a compound according to claims 1-22 and another therapeutic agent.

38. A method according to claim 37, wherein said composition comprises another therapeutic agent selected from the group consisting of (1-alpha, 2-beta, 3-alpha)-9-[2,3-bis(hydroxymethyl)cyclobutyl]guanine [(-)BHCG, SQ-34514, lobucavir], 9-[(2R,3R,4S)-3,4-bis(hydroxymethyl)-2-oxetanosyl]adenine (oxetanocin-G), acyclic nucleosides, acyclovir, valaciclovir, famciclovir, ganciclovir, penciclovir, acyclic nucleoside phosphonates, (S)-1-(3-hydroxy-2-phosphonyl-methoxypropyl)cytosine (HPMPC), [[[2-(6-amino-9H-purin-9-yl)ethoxy]methyl]phosphinylidene] bis(oxymethylene)-2,2-dimethylpropanoic acid (bis-POM PMEA, adefovir dipivoxil), [[(1R)-2-(6-amino-9H-purin-9-yl)-1-methylethoxy]methyl]phosphonic acid (tenofovir), (R)-[[2-(6-Amino-9H-purin-9-yl)-1-methylethoxy]methyl]phosphonic acid bis-(isopropoxycarbonyloxymethyl)ester (bis-POC-PMPA), ribonucleotide reductase inhibitors, 2-acetylpyridine 5-[(2-chloroanilino)thiocarbonyl] thiocarbonohydrazone and hydroxyurea, nucleoside reverse transcriptase inhibitors, 3'-azido-3'-deoxythymidine (AZT, zidovudine), 2',3'-dideoxycytidine (ddC, zalcitabine), 2',3'-dideoxyadenosine, 2',3'-dideoxyinosine (ddl, didanosine), 2',3'-didehydrothymidine (d4T, stavudine), (-)-beta-D-2,6-diaminopurine dioxolane (DAPD), 3'-azido-2',3'-dideoxythymidine-5'-H-phosphophonate (phosphonovir), 2'-deoxy-5-iodo-uridine (idoxuridine), (-)-cis-1-(2-hydroxymethyl)-1,3-oxathiolane 5-yl)-cytosine (lamivudine), cis-1-(2-hydroxymethyl)-1,3-oxathiolan-5-yl)-5-fluorocytosine (FTC), 3'-deoxy-3'-fluorothymidine, 5-chloro-2',3'-dideoxy-3'-fluorouridine, (-)-cis-4-[2-amino-6-(cyclopropylamino)-9H-purin-9-yl]-2-cyclopentene-1-methanol (abacavir), 9-[4-hydroxy-2-(hydroxymethyl)but-1-yl]-guanine (H2G), ABT-606 (2HM-H2G) ribavirin, protease inhibitors, indinavir, ritonavir, nelfinavir, amprenavir, saquinavir, fosamprenavir, (R)-N-tert-butyl-3-[(2S,3S)-2-hydroxy-3-N-[(R)-2-N-(isoquinolin-5-yloxyacetyl)amino-3-methylthiopropanoyl]amino-4-phenylbutanoyl]-5,5- dimethyl-1,3-thiazolidine-4-carboxamide (KNI-272), 4R-(4alpha,5alpha,6beta))-1,3-bis[(3-aminophenyl)methyl]hexahydro-5,6-dihydroxy-4,7-bis(phenylmethyl)-2H-1,3-diazepin-2-one dimethanesulfonate (mozenavir), 3-[1-[3-[2-(5-trifluoromethylpyridinyl)-sulfonylamino]phenyl]propyl]-4- hydroxy-6alpha-phenethyl-6beta-propyl-5,6-dihydro-2-pyranone (tipranavir), N'-[2(S)-Hydroxy-3(S)-[N-(methoxycarbonyl)-L-tert-leucylamino]-4- phenylbutyl-N-alpha-(methoxycarbonyl)-N'-[4-(2-pyridyl)benzyl]-L- tert-leucylhydrazide (BMS-232632), 3-(2(S)-Hydroxy-3(S)-(3-hydroxy-2-methylbenzamido)-4-phenylbutanoyl)-5,5-dimethyl-N-(2-methylbenzyl)thiazolidine-4(R)-carboxamide (AG-1776), N-(2(R)-hydroxy-1(S)-indanyl)-2(R)-phenyl-methyl-4(S)-hydroxy-5-(1-(1-(4-benzo[b]furanyl)methyl)-2(S)-N'-(tert-butylcarboxamido)piperazinyl)pentanamide (MK-944A), interferons, α -interferon, renal excretion inhibitors, probenecid, nucleoside

transport inhibitors, dipyridamole, pentoxyfylline, N-acetylcysteine (NAC), Procysteine, α -trichosanthin, phosphonoformic acid, immunomodulators, interleukin II, thymosin, granulocyte macrophage colony stimulating factors, erythropoetin, soluble CD₄ and genetically engineered derivatives thereof, non-nucleoside reverse transcriptase inhibitors (NNRTIs), nevirapine (BI-RG-587), alpha-((2-acetyl-5-methylphenyl)amino)-2,6-dichloro-benzeneacetamide (loviride), 1-[3-(isopropylamino)-2-pyridyl]-4-[5-(methanesulfonamido)-1H-indol-2-ylcarbonyl]piperazine monomethanesulfonate (delavirdine), (10R, 11S, 12S)-12-hydroxy-6, 6, 10, 11-tetramethyl-4-propyl-11,12-dihydro-2H, 6H, 10H-benzo(1, 2-b:3, 4-b':5, 6-b")tropyran-2-one ((+) calanolide A), (4S)-6-Chloro-4-[1E]-cyclopropylethenyl)-3,4- dihydro-4-(trifluoromethyl)-2(1H)-quinazolinone (DPC-083), (S)-6-chloro-4-(cyclopropylethynyl)-1,4-dihydro-4-(trifluoromethyl)-2H-3,1-benzoxazin-2-one (efavirenz, DMP 266), 1-(ethoxymethyl)-5-(1-methylethyl)-6-(phenylmethyl)-2,4(1H,3H)-pyrimidinedione (MKC-442), and 5-(3,5-dichlorophenyl)thio-4-isopropyl-1-(4-pyridyl)methyl-1H-imidazol-2-ylmethyl carbamate (capravirine), glycoprotein 120 antagonists, PRO-2000, PRO-542, 1,4-bis[3-[(2, 4-dichlorophenyl)carbonylamino]-2-oxo-5,8-disodiumsulfanyl]naphthalyl-2, 5-dimethoxyphenyl-1, 4-dihydrazone (FP-21399), cytokine antagonists, reticulose (Product-R), 1,1'-azobis-formamide (ADA), 1,11-(1,4-phenylenebis(methylene))bis-1,4,8,11-tetraazacyclotetradecane octahydrochloride (AMD-3100), integrase inhibitors, and fusion inhibitors.

39. A method of treatment of a viral infection in a mammal comprising administering to said mammal a composition comprising a compound according to claims 1-22 and ritonavir.